

DOCKET NO. 6000-011-52 (IND 105)



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: Denis KHOO, et al.

ART UNIT: 2611

SERIAL NO.: 09/750,530

EXAMINER: Jason P. Salce

FILING DATE: December 28, 2000

FOR: METHOD AND SYSTEM FOR PROVIDING A REWARD FOR PLAYING
CONTENT RECEIVED OVER A DATA NETWORK

DECLARATION UNDER 37 CFR § 1.131

ASSISTANT COMMISSIONER FOR PATENTS
PO BOX 1450
ALEXANDRIA, VA 22313-1450

SIR:

We, Raymond F. Ratcliff, III and Denis Khoo, hereby declare and state as follows:

1. This Declaration is submitted as evidence that the subject matter claimed in the above-identified application was reduced to practice by the present inventors prior to the prior art references as explained below. We note that on December 8, 2004, we submitted a prior 37 CFR § 1.131 declaration in this case with respect to diligence. However, in light of the fact that we reduced to practice the subject matter prior to the prior art references, we do not need the prior 37 CFR § 1.131 declaration, and thus we withdraw that declaration and all statements therein.

2. We are the persons named as the inventors of the above-identified application.

3. We have reviewed the present claims 1, 9-12, 17-18, 22, 44-47, 71, 73-74, 76, 78, 80-85, and 138 as set forth in the amendment dated September 21, 2005.

4. Prior to the filing date of Candelore (U.S. Patent 6,057,872) (July 9, 1997), and Eldering (U.S. Patent 6,457,010) (Dec. 3, 1998) we conceived the invention as claimed in at least Claims 1, 9-12, 17-18, 22, 44-47, 71, 73-74, 76, 78, 80-85, and 138, as noted with respect to Exhibits 1-5, which were all dated prior to July 9, 1997. Note that the dates have been redacted

from Exhibits 1-5.

5. Exhibit 1 attached hereto is a copy of a sketch, accompanied by a textual explanation, that illustrates the method for media distribution that is the subject of Application No. 09/750,530. Also attached is a typed version of the handwritten paper. The paper, as sketched and signed by Mr. Raymond Ratcliff, was dated prior to July 9, 1997. For ease of reference, Exhibit 1 has been recently annotated to show support for various features made in the claims of Application No. 09/750,530. Titled the "New Paradigm", the drawing on the upper right corner of Exhibit 1 is an illustration of aspects of the claimed embodiments. Starting at the bottom of the sketch, working up:

A. Each home represents individuals in different households.

B. The cable company, satellite, and Internet/wireless entities are intermediaries - passing data between individual users and a central computer. First, the intermediaries receive personal profile data from each user and forward it to the server of the central computer. After the central computer processes the user's profile information and generates customized media content for each user, the central computer sends said customized media content back to the user via the intermediaries. Acting as clients of the central computer, the intermediaries receive said customized media content from the central computer and forward the media to the appropriate users.

C. The server of the central computer is represented in the middle of the sketch by the three-dimensional box labeled, "Individualized Scheduler Software & Server". The central computer processes each user's personal profile and generates customized media content accordingly. As stressed in text below the sketch, customized media content means that users receive their own ads and their own content.

D. The customized media content, generated by the central computer and distributed to

individual users, consists of both advertisements and content. As seen at the top of the sketch, the central computer draws upon an advertisement database and a content database.

6. Exhibits 2-5 attached hereto include confidential business plans, all from before July 9, 1997, that illustrate the invention that is the subject of Application No. 09/750,530. For ease of reference, the Exhibits have been recently annotated to show support for various features made in the claims of Application No. 09/750,530.

7. A person of ordinary skill in the art would find support for the subject matter of the claims pending before the office in Exhibits 1 - 5, as indicated below. These exhibits show support for conception of the subject matter of the claims from before the critical date of July 9, 1997. The bold numbers in parenthesis refer to tab numbers in Exhibits 1-5.

Claim 1. (Currently Amended) A method for providing a reward for receiving customized content having a video component to at least one viewer over a data network, comprising **(4, 7, 22)**:

transmitting the customized content over the data network to a reception device as part of a customized schedule generated utilizing information about the at least one viewer **(4, 7, 16, 23, 24, 25-28)**;

presenting, on the reception device, the customized content for a presentation period **(4, 7)**; and

providing a reward if the presenting of the customized content satisfies a predetermined condition associated with the reward **(12, 21, 22)**.

Claim 9. (Currently Amended) The method of Claim 1, wherein the transmitting of the customized content comprises:

requesting, by the reception device over the data network, the customized content from server **(4, 7, 18, 21, 26, 27)**;

retrieving, by the server, the customized content requested (4, 7, 18); and
transmitting the customized content and the customized advertising to the reception device through the data network (4, 7, 18).

Claim 10. (Currently Amended) The method of Claim 9, wherein the transmitting of the customized content further comprises:

transmitting, by the reception device, information regarding characteristics of the at least one viewer to the server requesting the customized content from the server (4, 7, 13, 14, 18, 23, 24) ; and

storing, by the server, the information regarding characteristics of the at least one viewer (4, 7, 12-14, 26-28).

Claim 11. (Currently Amended) The method of Claim 9, wherein the reception device requests the customized content and customized advertising based on demographic information of the at least one viewer associated with the reception device (4, 7, 12-14, 25-28).

Claim 12. (Currently Amended) The method of Claim 1, wherein the reception device includes an intelligent television or a digital device (4, 7).

Claim 17. (Currently Amended) The method of Claim 1, wherein the presenting of the customized content comprises:

presenting the customized content for a presentation period sufficient to receive at least a portion of the customized content-(12, 14, 22).

Claim 18. (Currently Amended) The method of Claim 1, wherein the predetermined condition associated with the reward is defined to require that a presentation period exceed a predetermined threshold (12-14, 21).

Claim 22. (Previously Presented) The method of Claim 1, wherein the reward includes:
a monetary award or a right for a reward recipient to enter into a contest (12, 21, 22).

Claim 44. (Currently Amended) A system for providing a reward for receiving
customized content having a video component to a viewer over a data network, comprising (4, 7,
22):

a reception device capable of receiving the customized content customized in accordance
with a customized schedule based on information about the at least one viewer (4, 7, 25-28);

a server in communication with the reception device and capable of sending the
customized content to the reception device (4, 7); and

a reward engine in communication with the reception device and the server providing a
reward generated utilizing the information about the at least one viewer if the presenting of the
personalized content satisfies a predetermined condition associated with the reward. (4, 7, 12,
14, 21, 22)

Claim 45. (Currently Amended) The system of Claim 44, wherein the reception device
requests the customized content, prior to receiving the customized content, based on a viewing
habit of the at least one viewer (26, 27).

Claim 46. (Currently Amended) The system of Claim 44, wherein the reception device
requests the customized content based on demographic information of the at least one viewer (12-
14, 25-28).

Claim 47. (Currently Amended) The system of Claim 44, wherein the reception device
comprises a playback device or a display device, which includes an intelligent television or a
digital device (4, 7).

Claim 71. (Currently Amended) The method of Claim 1, wherein the customized

content is transmitted to the reception device in response to information received requesting the customized content (4,7, 18, 21, 25-28).

Claim 73. (Currently Amended) The method of Claim 1, wherein the reward is provided by a provider that transmits the customized content (29, 30).

Claim 74. (Currently Amended) The method of Claim 1, wherein the reward is provided to the at least one viewer associated with the reception device that presents the customized content (27, 30).

Claim 76. (Currently Amended) The system of Claim 44, wherein the predetermined condition associated with the reward is defined to require that a presentation period exceed a predetermined threshold (12, 14, 22).

Claim 78. (Currently Amended) The method of Claim 1, wherein the predetermined condition associated with the reward is defined based on demographic information of a recipient associated with the reception device (12-14, 25-28).

Claim 80. (Currently Amended) The method of Claim 1, wherein the reception device requests the customized content based on a viewing habit of the at least one viewer associated with the reception device. (26, 27)

Claim 81. (Previously Presented) The system of Claim 44, wherein the reward includes: a monetary award or a right for a reward recipient to enter into a contest. (12, 21, 22)

Claim 82. (Currently Amended) The system of Claim 44, wherein the customized content is transmitted to the reception device in response to information received requesting the customized content. (4, 7, 18, 21, 26, 27)

Claim 83. (Currently Amended) The system of Claim 44, wherein the reward is provided by a provider that transmits the customized content. (29, 30)

Claim 84. (Currently Amended) The system of Claim 44, wherein the reward is provided to the at least one viewer associated with the reception device that presents the customized content. (22, 30)

Claim 85. (Previously Presented) The system of Claim 44, wherein the predetermined condition associated with the reward is defined based on demographic information of a recipient associated with the reception device. (12-14, 25-28)

Claim 138. (New). The method of Claim 1, wherein the customized content includes customized advertising (4, 7, 25-28).

8. Exhibit 5 also shows reduction to practice from before the critical date of July 9, 1997. We had developed a rudimentary software for the system. The rudimentary software included a client portion and a server portion. The client portion and server portion were set up as separate programs because they were designed to operate over a network. The server code existed on the same physical machine as the client code, although their location was only for convenience for the purpose of running a demonstration. A person of skill in the art could take the client portion and the server portion and run them over a network, as we intended the software to run. We are both very experienced software engineers and managers (see resumes in Exhibit 7) and we developed the rudimentary client and server software ourselves.

A. The client portion was used to generate the screen shots shown in Exhibit 5. Although we have not been able to find code from the client software, the screen shots in Exhibit 5 (e.g., Tabs 5A-5K) are a result of the developed client code. Tab 5B shows individualized advertising coupled with an associated reward. Tab 5C shows the selection of individualized content based on viewer preferences. Tab 5F demonstrates the collection of a personal profile from the user. Tab 5G confirms that the client portion and server portion were adapted to interact over a network such as the Internet. Tab 5J demonstrates the collection of user preferences. In addition,

Tabs 5L-5N of Exhibit 5 demonstrate system diagrams upon which the rudimentary software was based.

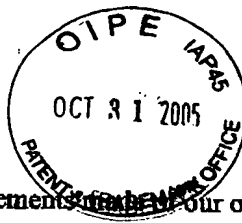
B. Exhibit 6 is the code for the server portion of the rudimentary software. This code is ERWIN data and was designed to run on Flash (Macromedia Director). Because the ERWIN data is very dated, we were unable to obtain a better print-out of this data. Specifically, Exhibit 6 represents the ERWIN data, as printed using QuickView Plus. Using this ERWIN data, the server used a regional database that managed individualization data, using tables. The server maintained information about: viewers (including their demographic data); advertisers (including the distribution requirements in relation to demographics); and content (including metadata that concerned the nature of the program and the sort of demographic that would enjoy it). All of these tables were related to other interest tables that allowed the individual viewer, the advertisement, and the content to be associated.

9. We hereby declare that all statements made of our own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the U.S. code and that such willful false statements may jeopardize the validity of the application and any patent issued thereon.



Raymond F. Ratcliff, III

Denis Khoo



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Raymond F. Ratcliff, III

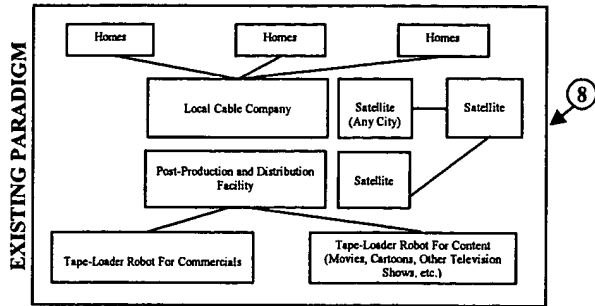


Denis Khoo

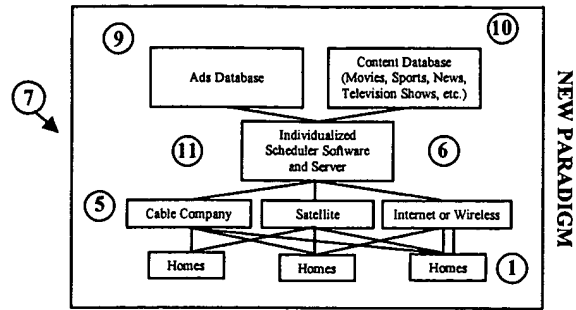
SHIFTING OF DISTRIBUTION PARADIGM

POST PRODUCTION FACILITY TOUR

Toured offsite facility used for post-production and distribution to cable companies and noticed many opportunities for efficiency redesign.



Teams of users work together to load in VCR tapes for ads and content. Both are loaded in predetermined sequence and same schedule is sent to each home via satellite to local cable companies.



A much improved paradigm here includes a totally new method for distribution that is *individualized* rather than broadcast. First, all content should be digitized instead of using VCR tapes. Second, with intelligent distribution software, viewers can retrieve their own ads or their own content. Third, ads will be sold for viewers instead of for particular shows. Because distribution methods are now one-to-one, the digital media can use the burgeoning "Internet". This individualization is inevitable – and no longer will the user be forced to watch a pre-canned schedule of ads and content.

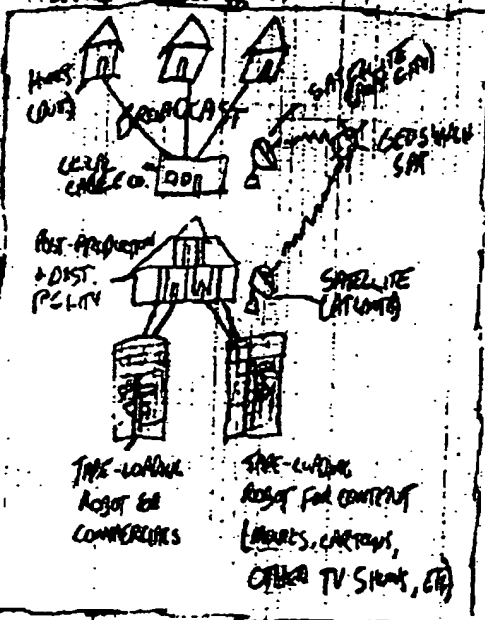
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SHIPPING OF DISTRIBUTION PARADIGM

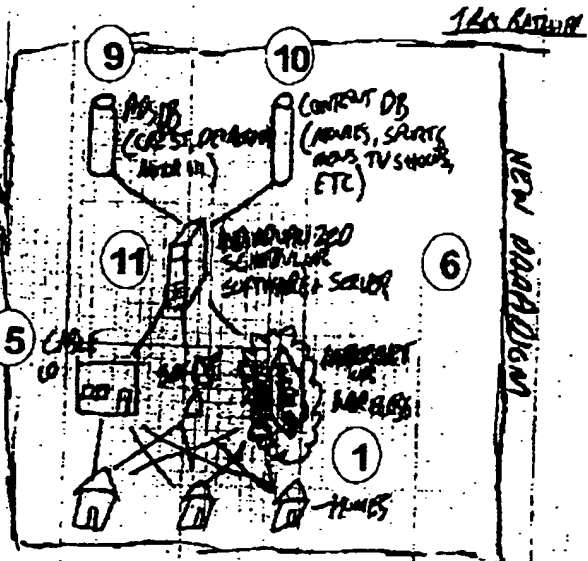
POST PRODUCTION FACILITY FOR ADS:

TOURED OFF-SITE FACILITY USED FOR POST-PRODUCTION & OBSERVATION TO CABLE CO. AND NOTICED MANY OPPORTUNITIES FOR EFFICIENCY IMPROVEMENT



TEAMS OF ROBOTX WORK TOGETHER TO LOAD IN VCR TAPES FOR ADS & CONTENT. BOTH ARE LOADED IN PREDETERMINED SEQUENCE AND SAME SCHEDULE IS SENT TO EACH HOME VIA SAT → CABLE CO.

Redacted



A MUCH IMPROVED PARADIGM HERE INCLUDES A TOTALLY NEW METHOD FOR DISTRIBUTION THAT IS INDIVIDUALIZED RATHER THAN BROADCAST. FIRST, ALL CONTENT SHOULD BE DIGITIZED INSTEAD OF USING VCR TAPES. 2. WITH INTELLIGENT DIST. SOFTWARE, VIEWERS CAN RECEIVE THEIR OWN ADS OR THEIR OWN CONTENT. 3. ADS WILL BE SOLD FOR VIEWERS INSTEAD OF FOR ADVERTISING SHOWS. BECAUSE DISTRIBUTION METHODS ARE NOW 1-TO-1, THE DIGITAL MEDIA CAN USE THE BURGEONING INTERNET. THIS INDIVIDUALIZATION IS INEVITABLE - AND NO LONGER WILL THE AGEX BE FORCED TO WATCH A PRE-DEFINED SCHEDULE OF ADVERTISING. 4

*Future Business Processes and Their Integration with the
Object-Oriented Architecture on Project Scarlett
High Level Design Proposal
Trey Ratcliff REDACTED*

Intended Audience

Andersen Consulting Project Management and Senior Partners responsible for garnering subsequent projects for the firm.

Existing Project Overview

The existing project plan for Project Scarlett at Turner Broadcasting calls for an improvement to existing business practices. The improvements are evolutionary in terms of inventory management, advertising sales, demographic analysis, and scheduling of content on the various Turner Networks.

Technical Architecture

Although the existing application suite is proposed to save Turner Broadcasting over \$40 million a year, there is much room for extensibility. The existing application architecture has been designed in such a way to allow for future extensibility, thereby allowing many future scenarios not yet contemplated to have room for implementation. My work with the architecture team has been to ensure that the existing planned applications can be further extended to meet future changes.

Future Objects

While the existing planned project is satisfactory to meet the needs of today, it is my personal educated judgment that this application will be fleeting, as the current broadcasting model itself will be undergoing serious changes in the next 10 years. Much of the existing architecture and databases can be reused in the objects laid out below, although integration may take between 18 and 24 months because of the fundamental change.

Paradigm Shift

The future of broadcasting is indeed not broadcasting but narrowcasting. Each viewer should be able to choose their own content or have advertising sent directly to them, rather than seeing the same thing as every other person. Naturally, this will require a means of transmission not yet practically possible, but I believe that equipment and transmission lines (possibly wireless) will make the means of physical to-the-curb distribution trivial. Just as Moore's Law dictates the doubling of speed of microprocessors every 1.5 years, the means and speeds of data transmission will increase in direct proportion.

Objects

The following objects can have business rules applied to them and need to be further refined by consulting process teams for a full analysis, however they will inevitably be part of the broad (narrow) casting landscape.

Demographic Object

Demographics are currently stored in a database relational manner that coordinates "viewers" to TV shows. Rather than relating a person to a show, the next evolution will involve a viewer being related to their TV, and not the show. In this manner, viewers become abstracted from being tied to a show or a commercial which may not relate to them.

Viewer Object

A viewer will have many properties different from the way viewers are currently defined. The current object system is Content-based, rather than Viewer-based. The viewer will have his own personal demographics and/or preferences which may or may not have overlap with the content they choose to watch. The viewer will have a schedule that is entirely personalized, enabling a number of methods to be used to allow individualized programming.

Ad Object

Advertisements themselves are already their own objects in the existing paradigm, but many of their

methods involve interaction with a particular piece of content. Ad Objects should be related to individual viewers to whom the advertisement should be targeted.

Camera Object

Each television will likely have its own camera, enabling each individual to become their own broadcaster. The camera object can be manipulated by the viewer to interact with other viewer objects as needed. The most basic application would naturally be a video phone system that uses the existing broadcast architecture.

Accounting Object

Advertising sales will change dramatically as advertisers stop buying space on shows and start buying time from individual viewers. Advertising sales can either be done over the phone, as currently exists, or over some type of client/server system.

Statistics Object

Two-way transmission of data will enable instant tracking of what content or advertising viewers are watching. This would involve integration and communication of all the objects. The statistics object can also update the viewer objects as necessary to update more detailed data on viewing habits, which in turn affects advertising sales.

E-Money Object

As all processes become automated, the accounting process will become automated as well. This will include automatic transfer and wired funds integrated into the client/server architecture.

Content Object

Just as the advertisement is not tied to the content, neither is the content tied to the advertisement. Both are independent objects that allow the viewer object to associate with either the content or the advertisement. It is a one-to many relationship from

the viewers standpoint, rather than the opposite system which exists today.

INTERNET Communications Object

The burgeoning INTERNET will no doubt have an impact on the business of broadcasting, despite what the naysayers currently predict. If not in narrow casting transmission, then it will have a significant impact on backend server systems which will most likely communicate over this open network rather than leased private fiber. The INTERNET will also likely be used in the advertising sales process. Although it may seem superfluous, time spent building an INTERNET translation layer for the architecture will be valuable in the future.

Object-Oriented Database Comm Object

As the future involves OO design and programming technologies, there should be another object created to deal with oo databases, an important wave of the future. It is best to hedge bets with new technology so that future programmers will have the ability to more easily access data seamlessly. The current dependence on relational databases will render large amounts of code unusable.

More Information

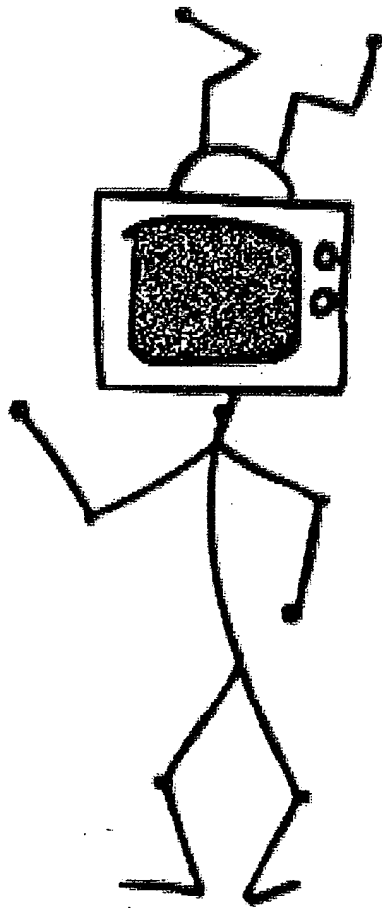
This has been a high-level design document, and further details are available upon request. Please contact Trey Ratcliff on the Turner Project in the tech arch area for more info.

of commercials and content, which also of course affects the online sales procedure. New objects would of course need to be created for the business rules to handle the personalized delivery of commercials based on demographics and content based on preferences.

As one object exists to communicate with other objects, the next step in the evolution of television is not only the individualization of commercials and content, based on heuristic-scored algorithms, but also the sales process. The sales process would move to an online medium, and this

method will most probably be on the INTERNET, the TCP/IP based system that will undoubtedly be the most popular form of communication and business transactions, despite what the technology naysayers are currently pronouncing. No matter the method of communication, the object oriented system can be integrated as needed.

Future personalized content, advertising, online sales, and all other related objects could more easily be integrated with the oo technical architecture developed here at the Scarlett Project.



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Description of Reward TV
A module of Castaway

Individual Network

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Description

Advertising will always be a driver in capitalist society, so it is impossible to envision a future of television that does not include advertising of some sort.

In the near future (5-10 years), people will probably be able to “get out of” most advertising, so they will either need to be “forced” to watch it (via product placement) or they will need to have incentives.

This speaks to the incentive program, where people can get rewards for watching TV commercials.

Each time a viewer sees an advertisement, they get another “chance” to win a prize, either from that advertiser or from the broadcaster. The viewer can see, if they wish, the number of entries they have to win, past winnings, etc.

This paradigm is an analog to a “rolling sweepstakes”, where the user can continually be entering sweepstakes after sweepstakes, just by watching ads!

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Advertisement and Prizes (Online sweepstakes)

Advertisements on Castaway will be the primary source of revenue for Individual Network. Advertisements are full screen, and highly animated. All advertisements will have a link to the company's web site or to the exact product being advertised.

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How it Works

For every advertisement, there will be an associated prize. The viewers' chance of winning these prizes will increase incrementally with each display of the ad. There will be no required involvement from the user. In other words, for every advertisement displayed on a particular user's computer, that user will gain an additional entry towards the drawing of the associated prize, without any intervention on their part. Winners will be automatically notified of their winning via email. Upon verification and acceptance, the winners will be shipped the prize at no cost whatsoever. In summary, all viewers are automatically eligible to win prizes, and the more viewers run Castaway, the better their chances of winning. This is the first implementation of users having an incentive to watch advertisements.

Example of advertisement/prize combination:

- | | |
|--|--|
| ➤ <i>Advertisement:</i> United Airlines | <i>Prize:</i> 100,000 frequent flyer miles |
| ➤ <i>Advertisement:</i> SprintPCS | <i>Prize:</i> SprintPCS Phone |
| ➤ <i>Advertisement:</i> Princess Cruises | <i>Prize:</i> Alaskan Cruise for two |

Our incentive program is the foundation for the success of our product. Never before have advertisement viewers had an active incentive for watching commercials. The concept is simple, although it sounds trite at first glance. The more advertisements you see, the more likely you are to win.

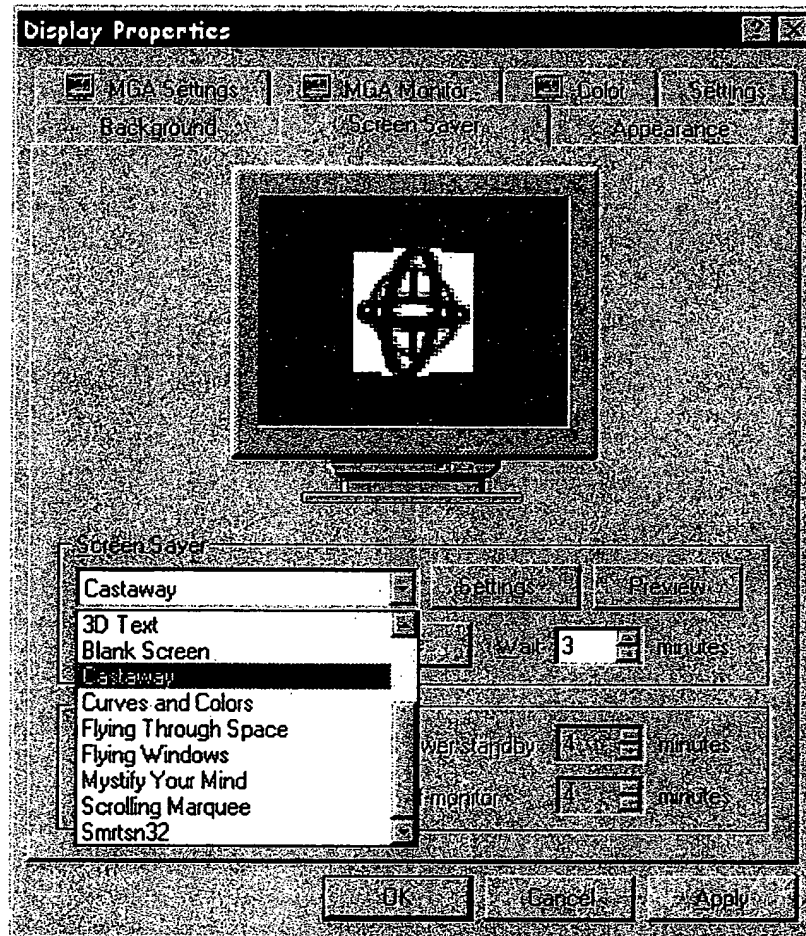


Figure - Using the same paradigm on your computer via a screensaver

Remember that when the user first installs the software, the user must supply his/her name and address. By doing so, they have supplied us with their shipping address for any prizes they may win. When prizes are awarded, an email is sent to the winner, and the prize is automatically sent to their home.

30

Depending on the number of advertisements, we will be able to have more prizes available. Most likely, we will have live drawings at noon everyday. These drawings, of course, will be all handled automatically with our Symbiosis engine. Once Castaway grows in popularity, we will be able to have many prizes every hour. It will be a non-stop sweepstakes where every viewer can win automatically, with no intervention on their part. As the number of advertisers increase, so will the number of prizes. We could potentially give away hundreds of prizes per day, with users tuning in all over the nation to see the live updates of whether or not they won.

Let's take another scenario for example. Dagny, an Castaway user, may see an advertisement for American Airlines. The associated prize may be "100,000 AAdvantage miles," which is also shown on the screen down in the ticker area. Also in the ticker area, Dagny sees that she currently has 37 entries to win that prize, meaning she has now seen that advertisement 37 different times. While the commercial is running, she reads the tickers below. They say things like:

- "5 awards of 100,000 AAdvantage miles will be given away at 2 PM PST on Tuesday, March 4th."
- "Dagny, you have 37 entries to win this prize. The average person has 28 chances, making you 27% more likely than the average person to win this prize."
- "Yesterday, our lucky American Airlines winners were Hank Reardon, John Galt, Ellis Wyatt..."
- "New prize coming next week -- an American Airlines trip for two to Rome, Italy!"

An Individual Network

This high level design document has been put together to collect all the experience and innovations created during my time at CNN/Turner over the past few years.

The key to the future, in my estimation, is designing an infrastructure that allows for individualization of both content and advertising. Inherent in this architecture will be ancilliary activities that feed into this process. Because this invention heralds in a new business model on a meta level, there are ripples that have major affects on how many businesses will interface with this new media paradigm.

25

The system will keep track of who is watching which screens at what time. This will take place via a logon, either automatic or manual. After logon, the viewer's personal profile will be identified and a personalized schedule of content will be built. Similarly, an advertising schedule will be built for that individual that is completely customized. How these two schedules go about being built is different, but, of course, it is all transparent to the user.

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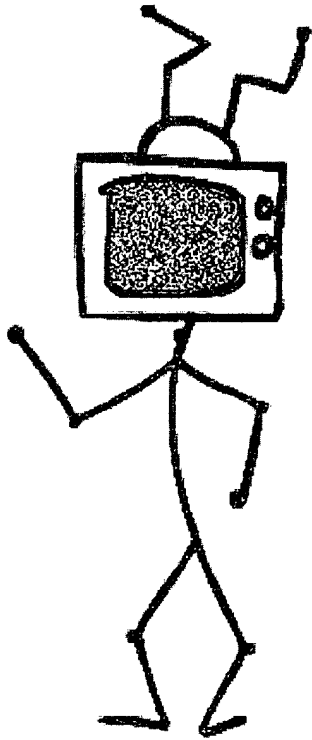
The content schedule is built based on a profile. The profile is based on demographics, previous viewing habits, viewer input, and other parameters. A matching service is used to match up all available content to the viewer's profile. A ranked list is returned based on whatever scoring heuristics are used by the matching service. This personalized schedule is shown to the user. The user can then manipulate the schedule however they want. They may even choose to pay a fee to not watch commercials.

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The advertising schedule is built in a similar way, except it is more advertiser driven. The advertisers are shown all the "viewers" at an anonymous level. They can "buy" time out of their lives. Each second of the viewer's lives is priced on a pure supply/demand model. Once viewers have their time sold, they become more saturated and their advertising price goes up. When that user logs on next, the ads that have been sold to them (or people like them) show up in their advertising schedule.

The individualized content schedule and the individualized ad schedule are then pulled together into one schedule, all of which is transparent to the user.

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Business Plan

Individual Network, Inc.

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Prepared by: Trey Ratcliff, Denis Khoo

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1.0 Executive Summary

1.1 Objective

We at Individual Network, Inc. are building the engine that will turn the gears of internet broadcasting.

Our flagship product, *Castaway*, brings a myriad of fresh entertainment and advertising/sweepstakes to the user's desktop while in screen-saver mode. We keep confidential demographic information on each user, so we can target advertisements to individual people via our one-to-one marketing paradigm. Each advertisement has an associated "prize." Every time a user sees an advertisement, they are automatically given another "entry" to win that prize. Each user is continually apprised of the number of entries they have for the prize, and it is automatically sent to their home when they win.

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During the initial release of *Castaway*, the user can select from different genres of content that would appeal to people who like comics and cartoons, movie buffs, sports fans, and investors who enjoy watching their stocks. The full-screen animated content and advertisements use Flash technology, which allows large and lively animations to be presented using very little bandwidth. And of course, *Castaway* is a free product.

~ ~ DREAM SEQUENCE ~ ~

You sit in your office, behind your computer thinking about how to best prepare for your presentation tomorrow. Your computer sits idle while you think, and normally enough, the screen saver comes on. However, what's not normal is the screen saver's content. As you continue to think about your presentation, today's Dilbert comic appears on your screen. Unlike Dilbert on print, this Dilbert is fully animated and much more lively. In today's episode, Dilbert once again mocks his manager's technical intelligence. You watch and can't help but snicker. Looking at the stock ticker down below, you see that your 3Com stock just went up 2 points! This puts a big smile on your face, until you see on the sports ticker that the Razorbacks are ahead by 10 points in the 3rd quarter. Immediately following Dilbert is a comic from *The Far Side*. You love *The Far Side*! (Of course you do, otherwise you wouldn't have selected for it to be shown.) Today's *Far Side* is also fully animated and even funnier than yesterday's. This time, you can help but crack up laughing. (You will be telling your co-workers and friends about *The Far Side* comic you just saw, and unknowingly, encouraging others to use *Castaway*.) Following *The Far Side* are several other comics along with an occasional movie preview. You enjoy these comics one after another, and suddenly... what's this, an advertisement?

The most interesting feature of our product is our unique approach to advertising. Those versed in innovative marketing techniques are familiar with the concept of *one-to-one marketing*. Our product's implementation of one-to-one marketing means we know everything (all demographic information), about the user, so we can show them advertisements that have been especially

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tailored for them. Our engine also does a number of other unique things, but these are described in detail later in our business plan.



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Essentially, we perform the same service as other broadcast entities, such as NBC or ESPN, except we enable true one-to-one marketing. In the computer industry, Castaway can be most closely likened to PointCast. PointCast is different because it does not offer one-to-one marketing, does not offer full screen animation, and it does not have a sweepstakes paradigm.

~ ~ DREAM SEQUENCE ~ ~

You see that the advertisement is for American Airlines and you are seeing ski pictures from Vail float across your screen. It looks like the prize for this advertisement is 100,000 frequent flyer miles. You wonder how many chances you have to win that prize, then down in the corner you notice that you have 9 entries to win that prize. It looks like the prize drawing will be tomorrow at noon. Shoot! You have a meeting then.

The next afternoon you get an email from Individual Network saying that you won the prize and it will be delivered straight to your home in two weeks. I guess watching this commercial 9 times paid off after all! You make a note to yourself that it might be worthwhile to keep your screensaver active so that you have more chances to win prizes in the future.

In a few years from now, there will be no difference between the internet and broadcast television. They will become one. The advertising agency Jupiter recently projected that \$7.7 billion dollars will be spent for online advertising by the year 2002. The most popular broadcast medium is soon to become the internet. From our financial models, Castaway looks to make significant profits one or two years down the road. ***BOTTOM LINE – If the growth of Castaway is on par with PointCast, and if we charge a comparable advertising rate, the company will make over \$75 million in profit after only 2 years in production.***

1.2 Prototype

The Castaway prototype has been built and is fully operational. This business plan discusses the details, supporting figures, and other financial statements. However, words cannot fully express what Castaway actually looks like. Whenever possible, this business plan should be presented along with the prototype to ensure that the most realistic impression of the product is left. In this sense, it is comparable to a surround sound. You can read about it all day long, but it cannot be fully appreciated until you actually hear what it sounds like in person.

1.3 Mission

To be the leader in internet broadcast technology.

1.4 Keys to Success

- We must quickly go to market with this unique product, while internet broadcasting is still in its fledgling stage.
- We must make our product attractive enough to at least 100,000 users out of the 147,800,000 (Statistical sources sited at end) current internet users.
- We must make people aware of our unique engine that automatically keeps track of how exactly many advertisements are shown, the demographics to which those advertisements are shown, and the seamless integration of prize giveaways. This engine will be very attractive to other broadcast entities that will also be entering the internet broadcast arenas.

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2.0 Company Description

Individual Network, Inc. originated as a vision by its founders in November of 1998. The vision was to provide full-screen entertainment to computer users in the form of a screen saver. Today, the vision is a few steps closer to reality. Having demonstrated proof of concept and preliminary design of the client/server engine, Individual Network is now prepared to finalize the design and begin development of its first product – Castaway.

2.1 Company Ownership

Individual Network is a privately held corporation owned solely by its founders, Trey Ratcliff and Denis Khoo. Individual Network has already formed a limited liability partnership and has set up the current corporation as the general partner.

2.2 Company Position

The company is currently seeking equity funding and plans on offering partnership into the company as a means of compensation. Once the desired funding level is reached, Individual Network will be able to begin full-scale application development, as well as set up a network infrastructure in preparation for the launch of its first product.

3.0 Products and Services

Castaway is the flagship product of Individual Network, and will probably be the only product throughout the next few years. Castaway's ease-of-use, modular design, and user customizable features will allow the product to be geared "toward the masses." It is our expectation that Castaway will revolutionize online broadcasting through its introduction of a new advertising paradigm and computer-based entertainment media.

3.1 Product and Service Description

Castaway is essentially a dynamic screen saver that provides entertaining content, informative tickers, and our patent pending mix of advertisement and prizes (ongoing online sweepstakes). Fresh data is delivered to the screen saver several times a day. The screen saver is similar to today's television media in many ways; while activated, Castaway is audible and provides full-screen animation. Castaway merely provides a very simple, yet effective interface, to display content. Such a nonrestrictive and powerful interface will allow for a virtually unlimited variety of content; content can thus be geared toward any users demand, much like television today.

3.1.1 "Symbiosis" Engine

Castaway runs on the *Symbiosis* engine. "Symbiosis" is our code name for the underlying software which makes our application work. The details of exactly how the Symbiosis engine works are explained later in the operations section. Essentially, the symbiosis engine integrates an open-ended content display mechanism with an advertising server.

The engine itself is spread across two fronts. Without getting overly technical here, our product is comprised of two separate systems – the client and the server. The client runs on the user's computer and is capable of displaying several media types (such as pictures, sound, and animation). The client system receives all of its data from the server system via the internet. The server system sends the content and advertisements to the users computer. It is also responsible for keeping track of what advertisement is sent to a user, keeping track of the current prize database, and logging several other pieces of useful information.

Typically, information will be transferred to the user's computer before it is displayed, so there is never any "wait" time. The *Symbiosis* engine will display old content, while fresh new content is downloaded to the client's system. In the case where the user has absolutely no old content saved on his/her system and runs Castaway, the *Symbiosis* engine will be able to stream the new content to the user's machine.

The *Symbiosis* engine has several value added features for advertisements:

- Tracks the number of impressions per advertisement by user
- Tracks the number of clicks (when the user clicks on a link to find out more)
- Records gender, age, marital status, income, etc. (all of the demographic details) about the user who saw the advertisement

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- Allows for easy generation of reports for the advertisers (Reports will be immediately available online for advertisers to view real-time statistics)

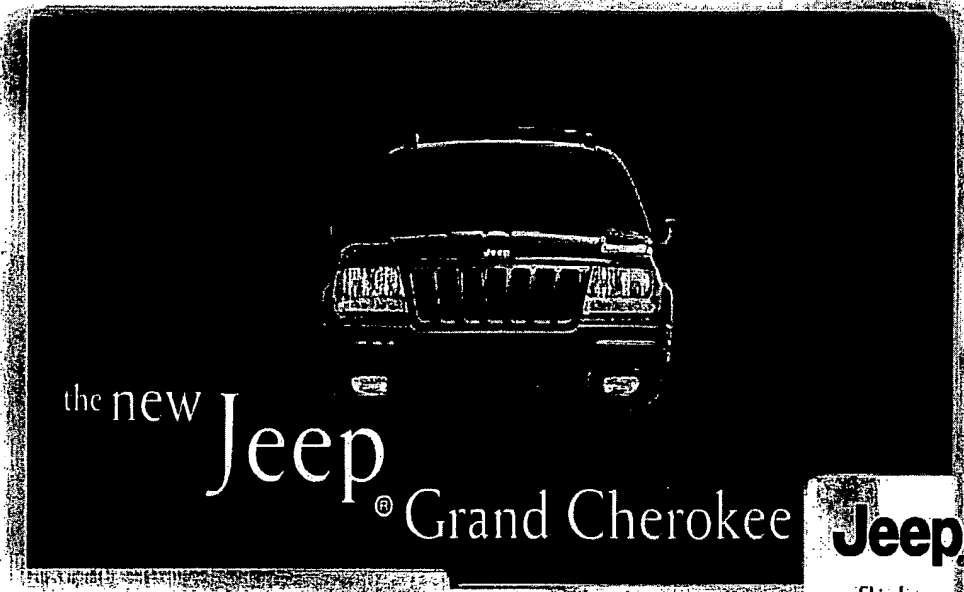
Consider how people currently seek out entertainment on television. They may have several different channels they like to watch, so they are constantly switching around from one program to another on different channels. Because television is one-way communication, there is no way that a viewer can customize what they see. Castaway, on the other hand, is a “personal broadcast network,” meaning that users can select exactly what programs they wish to see.

Once this engine is built, it will be very attractive to other broadcast entities that wish to broadcast over the internet. Because of this, the Symbiosis engine has been designed so that another broadcast company could utilize it to broadcast their own content and plug in their advertisements. Having such a modular engine would allow for possible licensing scenarios in the future.

3.1.2 Interface

There are two main components to Castaway – the “dynamic content” and the “tickers.” The “dynamic content” component makes up the core of Castaway. In this component, all animated advertisements and user selected content is displayed. Dynamic content is discussed in detail in section 3.1.5. The “tickers” component is optional and is displayed only if the user selects to view one or more tickers. Tickers are discussed more in section 3.1.6.

5A

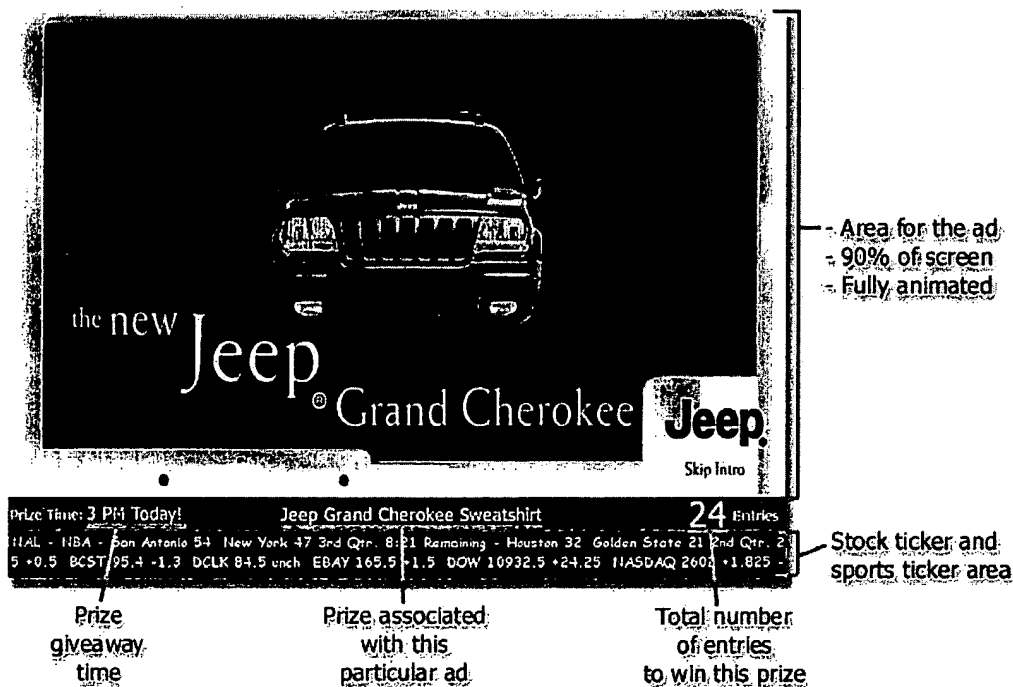


The advertisement features a black and white image of a 1999 Jeep Grand Cherokee. The text "the new Jeep® Grand Cherokee" is prominently displayed in a serif font. To the right of the car, the Jeep logo is shown with the text "Skip Intro" below it.

Prize Time: 3 PM Today! Jeep Grand Cherokee Sweatshirt 24 Entries

NAL - NBA - San Antonio 54 New York 47 3rd Qtr. 8:21 Remaining - Houston 32 Golden State 21 2nd Qtr. 2
5 +0.5 BCST 95.4 -1.3 DCLK 84.5 unch EBAY 165.5 +1.5 DOW 10932.5 +24.25 NASDAQ 2602 +1.825 -

Figure 3.1 - Castaway in action showing an advertisement for the 1999 Jeep Grand Cherokee



5B

Figure 3.2 - The components of Castaway

Figure 3.2 shows all of the interacting components of Castaway. A majority of the screen is occupied by the animated advertisement. This section is completely available to the creativity of the advertiser or content creator. Just below that, the prize information is presented. Prize information (from left to right) includes the date and time when the prize will be awarded, what the prize is, and how many entries the user has for the prize. The prize information ticker is dynamic and will also display other useful information related to the prize. In the figure above, the user will see that Jeep is giving away a sweatshirt, and off to the right, the user see that he/she has 24 entries for that prize. Each time this specific advertisement is view, the user's number of entries will increment by one. So the next time the user sees this ad, he/she will have 25 entries for the prize. In addition, if the user clicks on the advertisement (thus opening a web browser directed to the Jeep web site), the user will gain a bonus of 10 entries for the prize.

Just below the prize information ticker is the sports ticker. At the very bottom of the screen, the stock ticker is displayed.

Because we boast that we are a "Personal Broadcast Network," we naturally allow the user to customize what they want to see. While Castaway is running, the user may right click with on the mouse anywhere on the screen. Upon right clicking, a pop-up menu will appear (see Figure 3.3), while Castaway continues to run.

5C

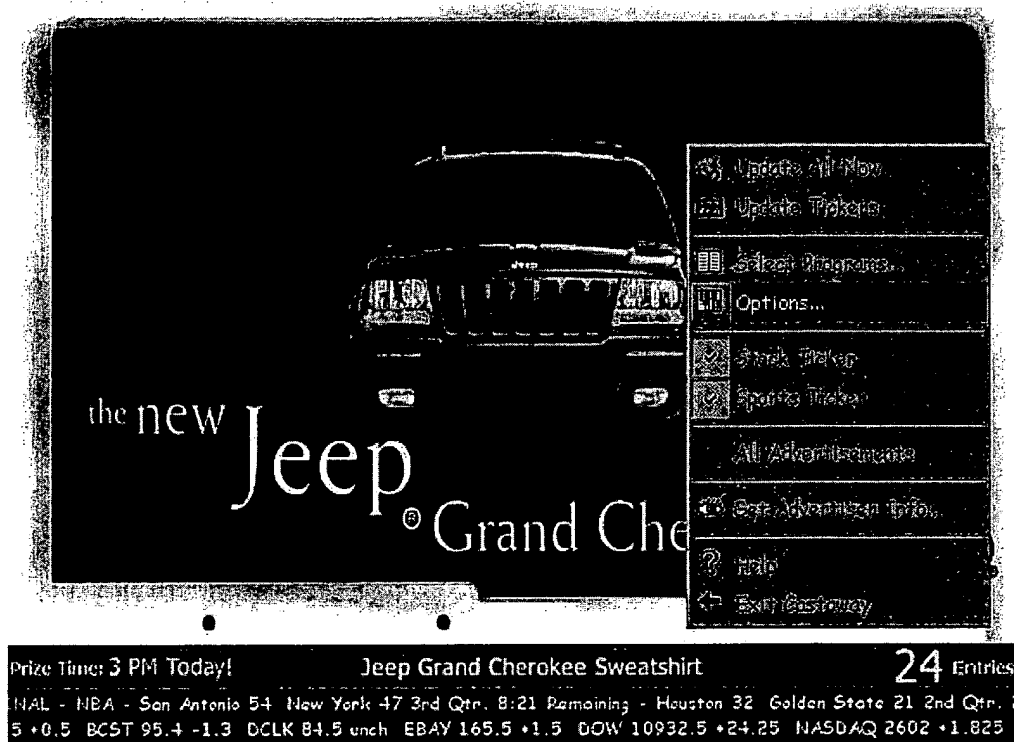


Figure 3.3 – The pop-up menu which appears when the user right-clicks

The pop-up menu will allow the user to make a number of selections. They may choose the following options:

- **Update All Now** – This will download a fresh load of content and advertisements to Castaway via the internet. Remember, all of the updates are automatic, and they occur at regular intervals. This menu option allows the user to update immediately, rather than wait for the automatic interval update.
- **Update Tickers** – Updates the Stock Ticker and the Sports Ticker. If the user is connected to the internet, these are continually updated without the user's intervention.
- **Select Programs...** - Allows the user to choose which kind of programs they wish to view.
- **Options...** – Allows the user to customize all of their options. This is discussed in section 3.1.6
- **Stock Ticker** – Allows the user to toggle the Stock Ticker on or off.
- **Sports Ticker** – Allows the user to toggle the Sports Ticker on or off.
- **All Advertisements** – This option will turn on 100% advertisements, so that the user can maximize their chances to win prizes.
- **Get Info...** - If selected during an advertisement, the user extended information about the advertiser or product is displayed in a dialog box. This will also allow them to visit the web page. If selected during a program, the user will see more information about the program, such as publisher, creation date, etc.

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- **Help** – Brings up help windows.
- **Exit Castaway** – Leaves Castaway and returns to Windows.

The “Options” window can also be reached using Windows Control Panel by selecting “Display” and clicking on the “Screen Saver” tab. Having Castaway selected as the default screen saver, a click on the “Settings” button will bring open the “Options” window.



5D

Figure 3.4 - Setting up Castaway as Windows screen saver

3.1.3 Advertisement and Prizes (Online sweepstakes)

Advertisements on Castaway will be the primary source of revenue for Individual Network. Advertisements are full screen, and highly animated. All advertisements will have a link to the company’s web site or to the exact product being advertised.

3.1.3.1 How It Works

For every advertisement, there will be an associated prize. The viewers’ chance of winning these prizes will increase incrementally with each display of the ad. There will be no required

involvement from the user. In other words, for every advertisement displayed on a particular user's computer, that user will gain an additional entry towards the drawing of the associated prize, without any intervention on their part. Winners will be automatically notified of their winning via email. Upon verification and acceptance, the winners will be shipped the prize at no cost whatsoever. In summary, all viewers are automatically eligible to win prizes, and the more viewers run Castaway, the better their chances of winning. This is the first implementation of users having an incentive to watch advertisements.

Example of advertisement/prize combination:

- | | |
|--|--|
| ➤ <i>Advertisement:</i> United Airlines | <i>Prize:</i> 100,000 frequent flyer miles |
| ➤ <i>Advertisement:</i> SprintPCS | <i>Prize:</i> SprintPCS Phone |
| ➤ <i>Advertisement:</i> Princess Cruises | <i>Prize:</i> Alaskan Cruise for two |

Our incentive program is the foundation for the success of our product. Never before have advertisement viewers had an active incentive for watching commercials. The concept is simple, although it sounds trite at first glance. The more advertisements you see, the more likely you are to win.

Remember that when the user first installs the software, the user must supply his/her name and address. By doing so, they have supplied us with their shipping address for any prizes they may win. When prizes are awarded, an email is sent to the winner, and the prize is automatically sent to their home.

Depending on the number of advertisements, we will be able to have more prizes available. Most likely, we will have live drawings at noon everyday. These drawings, of course, will be all handled automatically with our Symbiosis engine. Once Castaway grows in popularity, we will be able to have many prizes every hour. It will be a non-stop sweepstakes where every viewer can win automatically, with no intervention on their part. As the number of advertisers increase, so will the number of prizes. We could potentially give away hundreds of prizes per day, with users tuning in all over the nation to see the live updates of whether or not they won.

Let's take another scenario for example. Dagny, an Castaway user, may see an advertisement for American Airlines. The associated prize may be "100,000 AAdvantage miles," which is also shown on the screen down in the ticker area. Also in the ticker area, Dagny sees that she currently has 37 entries to win that prize, meaning she has now seen that advertisement 37 different times. While the commercial is running, she reads the tickers below. They say things like:

- "5 awards of 100,000 AAdvantage miles will be given away at 2 PM PST on Tuesday, March 4th."
- "Dagny, you have 37 entries to win this prize. The average person has 28 chances, making you 27% more likely than the average person to win this prize."
- "Yesterday, our lucky American Airlines winners were Hank Reardon, John Galt, Ellis Wyatt..."
- "New prize coming next week -- an American Airlines trip for two to Rome, Italy!"

3.1.3.2 Current Trends in the Marketplace

The new trends towards web advertising are interesting. There is another company called "CyberGold" which is doing something remotely similar to Individual Network. This is their business model, which sounds a little shaky to us. Users come and visit their web site, and they read about a particular product. After answering a "quiz" about that product, the user is given 50 cents. This money is applied to their Visa card as a credit. Users can come back to the site as many times as they desire, but they cannot earn more than \$100 in a month.

Despite the unusual sounding business model, CyberGold memberships have grown to 1.5 million users as of March 1, 1999. There are at least half a dozen other companies who are doing this sort of promotional advertising, such as Netcentives, which offers Frequent Flyer miles in exchange for reading advertisements. All of these ideas involve a certain level of user interaction, which is the fundamental difference between our product and theirs. Fortunately, it appears that advertisers are clearly ready to embark on innovative methods of marketing their products. Our engine is the most streamlined and user-friendly method of doing so.

Perhaps the most important aspect is to differentiate ourselves from the "Click and Win" phenomenon all over the web. Users are weary of prize giveaways, because they believe that "nothing is really free." Often times, users are made to fill out long forms, answer personal questions, or put their email on some mailing list. We will require none of that. All the user needs to do is supply their address for the prize delivery, and that is only done once during the installation of the software. One of our main thrusts with our public relations campaign will be to inform the public of the unique service we are able to provide.

Advertisers are, of course, attracted by ratings. Our ratings will be based, ironically enough, partially on the number and variety of advertisers we have. The more advertisers we have, the more giveaways we will be able to offer. That, in turn, will feed the ratings, which will bring more advertisers. It is very much a self-fulfilling prophecy.

3.1.4 One-to-one Marketing

One-to-one marketing is the ability to have an advertisement shown to only certain users. The opposite of one-to-one marketing is what exists today – when an advertisement is broadcast to many people, regardless of their particular demographic category.

We seek to position the company as a leader in "permission marketing." That is, users are invited to tell us all they can about themselves. When users first install Castaway, they will be able to enter both basic and detailed demographic data. The basic data will include items such as number of people in household, average income, ages, hobbies, etc. Detailed data would allow users to choose their interests and other personal information (e.g. Sculling, Computer Games, Poetry, Wine, see Appendix 9.2 for full list). Of course, this information is optional, and not required. However, users will have an incentive to fill out extremely detailed advertising data. If users provide us with additional information, they will receive 10 free entries for every prize that is offered immediately. Once we know this data about each user, we can target advertisements to individual people, which is the optimum situation for advertisers.

There is no other broadcast medium that can do this today. Certainly televisions are not smart enough to know anything about the person watching them. PointCast does not even make use of one-to-one marketing. For example, if you are watching the "Sports" channel on PointCast, you will see advertisements for deodorant and motor oil (typical products that are associated with the demographic that enjoys sports.) So, if a 67 year old woman were watching the Sports channel, she would still see advertisements for deodorant and motor oil. Conversely, she would see advertisements that were meant for her in particular, no matter what "channel" she was watching.

3.1.5 Content

Content is basically any full screen graphics, animation, and sound displayed by Castaway in the screen saver. Content from Castaway however will be much more interactive, interesting, intelligent, and no doubt, original. Content will be displayed for approximately 30 seconds at a time, and no more than 2 minutes. It is possible that the first release of Castaway will have no content whatsoever, and consist of 100% advertisements. However, once the engine is built, adding content will not be a significant technical issue.

A hierarchical structure will be implemented to organize the potentially vast array of content available in the future. The hierarchy will be set up as follows:

Channels (i.e. Comics, Local News, National News, Artistic)
Programs (i.e. Dilbert, S.F. News, USA Today, Poetry)
SubPrograms (reserved for future use)

Initially, only four *channels* will be available to the user:

- Comics
- Movies
- Sports
- Stocks

The "Comic" *channel* brings full screen animated cartoons to the desktop, something that has never been done before. Web Magazine, in their February 1998 edition, said, "Combine comics, cartoons, and the Web, and you get a place where independent artists can find an audience right alongside the big guys." Castaway will include *programs* such as "Dilbert," "The Far Side," "SouthPark," and potentially a few titles from Marvel Comics. These comics will be based on comic publications, such as the ones seen in comic books and newspapers, except with much more flair and life. The comics will be fully animated, may include background music, audible, and possibly interactive. John Kricfalusi, creator of the popular Ren & Stimpy cartoon, is an avid proponent of creating animated cartoons on the internet. He recently said, "I'm gonna hurt TV. I'm gonna make stuff they can't do on TV, compete with them directly, and I'm gonna be more popular." We are already in contact with this individual about using Castaway as his distribution medium, which is very exciting to him.

The "Movie Preview" *channel* will include *programs* such as "Action," "Comedy," "Romance," and "Horror/Suspense." This will provide a whole new means of providing movie previews over the internet. As of June 2, 1999 Flash has been downloaded over 145 million times from Macromedia's web site, so it is clearly the most popular vehicle for animation. There are already several movie previews which have been implemented using Flash technology, and Castaway will be able to broadcast such content to the general public.

We discuss these content types, in addition to the stock ticker and the sports ticker more in the "Target Audience" segment, of section 4.2.

3.1.6 Informative Tickers

There will be the option of displaying two informative tickers. These tickers will be located at the bottom of the screen. There will be enough room for two tickers, the bottom row ticker and the top row ticker. These tickers will scroll from right to left by default at a predefined speed; the scrolling direction and speed can be controlled by clicking and dragging on the ticker. In the initial release, the user will have the option of selecting two tickers from a list of two. The two optional tickers are the "Stock Quote Ticker" and the "Sports Score Ticker." The third ticker, known as the "Prize Ticker," is not optional and is displayed only during ads. More information on each of these tickers follow.

Stock Quote Ticker: The user will be able to display fifteen minute delayed stock quotes via this ticker. Users will be able to select up to 100 quotes to display, and quotes can be automatically updated every 15 minutes, independently – the entire Castaway content package need not be updated. The ability of the "Stock Quote Ticker" to update independently makes it unique within the entire Castaway package. Individual Network will be able to obtain fifteen minute delayed quote from several different sources at a very low rate. It is likely that Quote.com will be Individual Network's stock quote provider. The "Stock Quote Ticker," if selected, will always be displayed as the bottom row ticker.

Sports Score Ticker: This ticker will allow the user to display the latest sport scores. The specific sports will be defined by the user. The "Sports Score Ticker" will be displayed as the top row ticker if there is currently no first row ticker selected. Otherwise, it will be displayed as the bottom row ticker.

Prize Ticker: The last available ticker is rather unique within the industry and is made possible through the association of prizes with all of Castaway's advertisements. During the display of an ad, the "Prize Ticker" will provide informative information on the specific viewer's opportunity of winning the ad's associated prize. This information includes: the prize, the quantity of the prize available for winning, the date and time when the prize will be awarded, and most importantly, the number of entries the current viewer has toward the drawing of the prize.

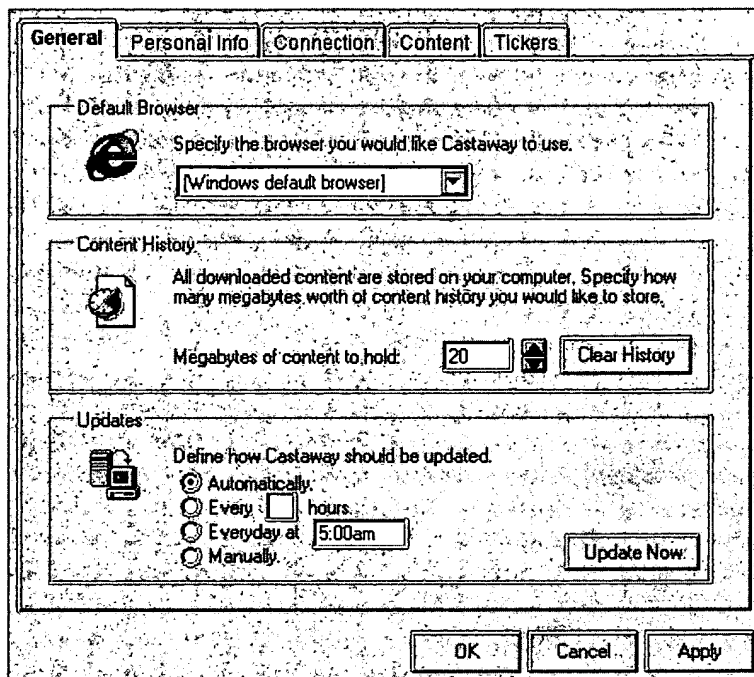
During an ad, the "Prize Ticker" will be displayed as the top-most ticker. If there are currently no tickers selected for display, the "Prize Ticker" will automatically be displayed as the bottom row ticker.

3.1.7 User Customizable Features

18

Castaway users are able to broadly specify what content they are interested in viewing. Based on these specifications, content and advertisements are “pushed” onto user desktops. This is the ideal situation for a screen saver paradigm, because the user will automatically get fresh content everyday. While in screen saver mode, users are not interested in constantly specifying what content to display. Castaway is no doubt one product where push technology will be warmly welcomed. In most cases, a whole day’s worth of content and advertisements will be sent to the client between 3 AM and 4 AM everyday when internet traffic is at a minimum.

To summarize exactly what users may customize, below are screenshots and descriptions of the “Options” window that has been in development over the previous years.



5E

Figure 3.7 The General tab within the Options window

Within the *General* tab, the user can set which web browser will be used by Castaway when required. The browser will generally be launched when the user clicks on an advertisement. This will lead the user to the advertiser’s web page or to a particular page where they may purchase the product being advertised.

The user may also decide how much content history should be stored on his/her computer. The amount of content history is defined in megabytes, and can be adjusted in increments of one.

Here, the user may also “Clear History” which will force remove all content history. This can also be automatically done by the client-side Castaway engine.

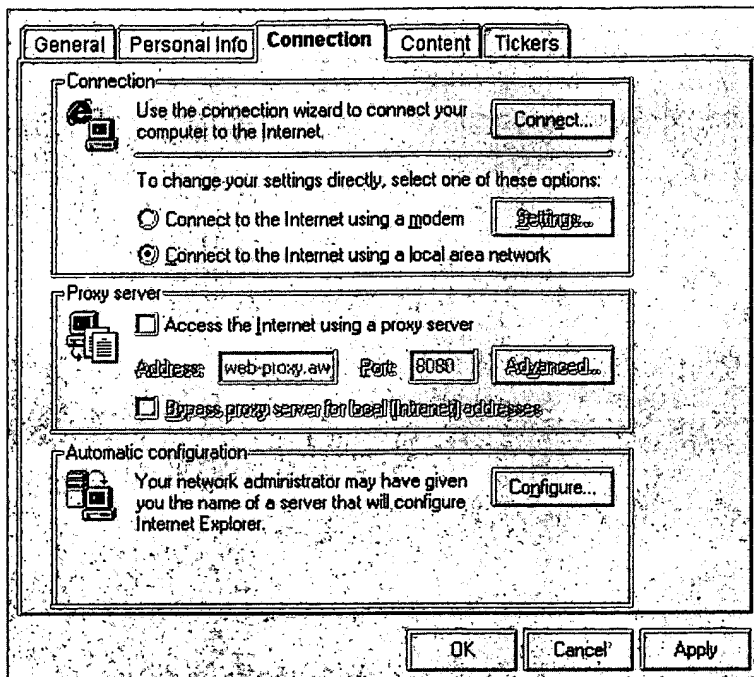
Finally, the user is able to define how and how often Castaway should update its content. More detail on this can be found below, in section 3.1.7. The “Update All Now” menu option causes Castaway to force update its content.

The screenshot shows a software window titled 'Options' with a tabbed interface. The 'Personal Info' tab is active. It contains two main sections: 'Home Information' and 'Business Information'. The 'Home Information' section has fields for First Name, Last Name, Address 1, Address 2, City, Phone Number (with sub-fields for area code, prefix, and line number), Email Address, MI (checkbox), State (dropdown), and Zip Code. The 'Business Information' section has fields for Company Name, Title, Address 1, Address 2, City, Phone Number (with sub-fields), State (dropdown), and Zip Code. At the bottom of the window are 'OK', 'Cancel', and 'Apply' buttons.

5F

Figure 3.8 - The Personal Info tab within the Options window

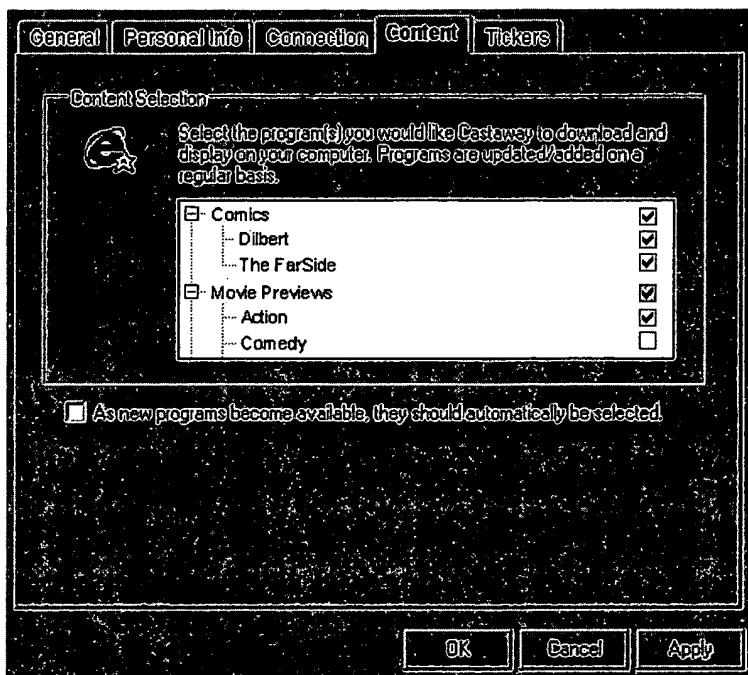
Within this tab, the user enters all personal information. This includes both home and business information. The home information is required (though not all fields are required), and the business information is completely optional. Home information is so we can send the winner's prize to their home. This information will not be distributed, and will be kept internal to Individual Network in order to protect the user.



5G

Figure 3.9 - The Connection tab within the Options window

The purpose of the Connection tab is so Castaway can figure out the type of internet connection the user has. Most of this will be automatically configured during installation, but the user may always change the specifics at any given time. More detail on this can be found below in section 3.1.7.

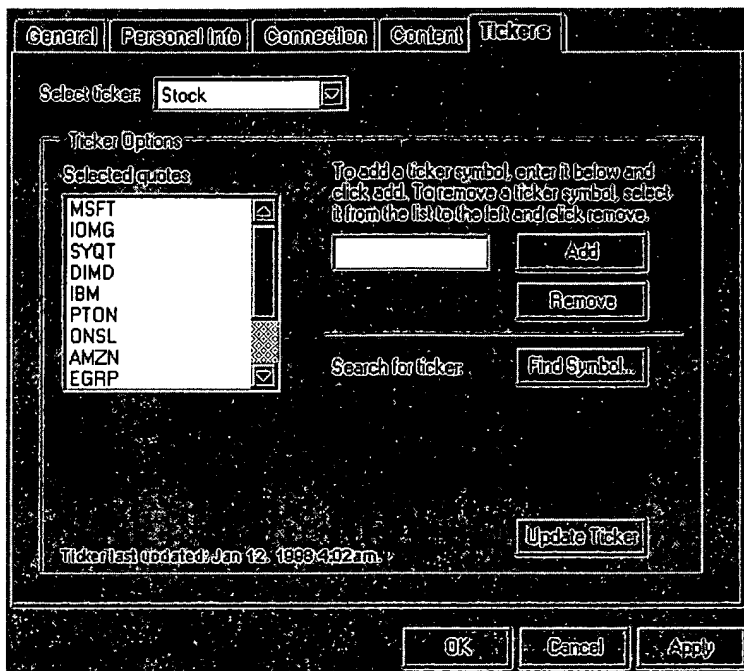


5H

Figure 3.10 - The Content tab within the Options window

Within the Content tab, the user chooses which programs should be downloaded and displayed in Castaway. Navigating through the hierarchy of channel and programs can be done through a familiar "Explorer" like interface. If the user would like all programs within a channel selected, he/she may check the channel, thus automatically selecting all programs within that channel. If not all programs within a channel are selected, the channel will show a gray checkbox with a checkmark. If no programs within a channel are selected, the channel will show a white checkbox without a checkmark.

Below the program selection is the option to automatically select new programs as they become available. This will be checked by default, meaning all new programs added to Castaway will automatically be downloaded and displayed on the user's system.

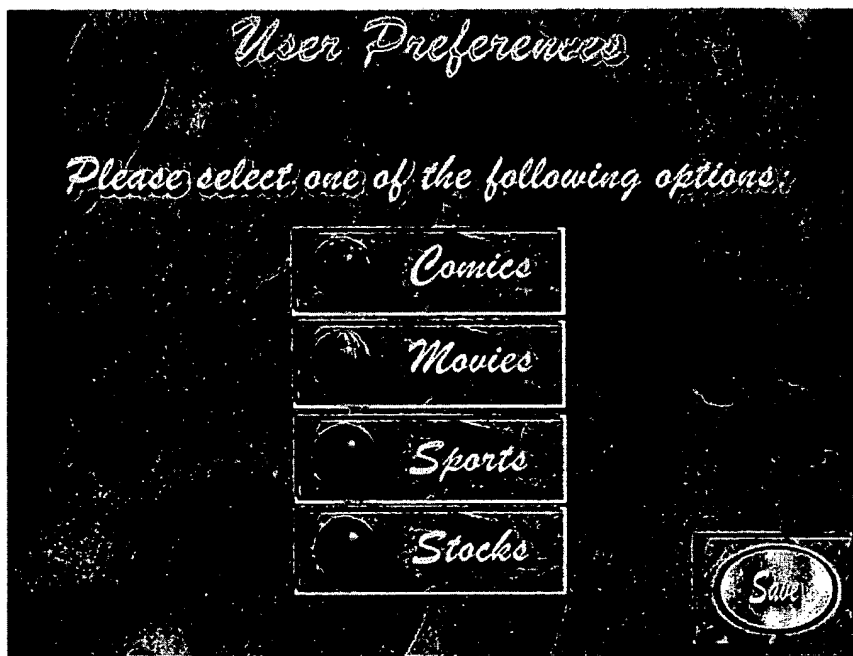


51

Figure 3.11 - The Tickers tab within the Options window

In this tab, the user first selects the exact ticker to modify. In the above example, the user has selected the "Stock" ticker. The user now has the options to include or exclude information from the ticker. In this particular case, the user can add stock quotes, or remove them from the list. The user is also given the option to search for a ticker symbol if required. On the bottom left is the date and time when the ticker was last updated. Finally, the user may force update the ticker by clicking on "Update Ticker."

During installation, the user will be presented with a series of user friendly menus. Many of our users will be installing on their computer system that is connected to their television set or have WebTV. Small option menus are sometimes difficult to see and navigate on a television screen. Large, full screen menu systems will be extremely usable to people who are computer illiterate. The following screenshots show how simple it will be for the user to choose their preferences during installation.



5J

Figure 3.12 - Integrated Program Selection main screen

This Integrated Program Selection screen allows the user to choose which programs are to be displayed. Basically, this provides the same functionality as the Content tab within the Options window. The advantage here is the interface, which will run in full-screen, just like another Castaway content.



5K

Figure 3.13 – If the user clicked on comics in Figure 3.10, they are brought to this screen where they can select exactly which comics they wish to view.

3.1.8 Internet Connectivity

As seen in the "User Preferences" window, the user has control over when and how often Castaway performs updates. LAN and dialup internet users (who specify that Castaway may connect to the internet) may select to update "Automatically," "Every XX Hours," "Everyday at XX:XX," or "Manually." The default time will be every morning before dawn when internet usage is at a minimum. A dialup internet user who specifies that Castaway does not have authority to connect, will only have the options to update "Automatically" and "Manually."

Class A Connectivity	LAN user, DSS satellite user, cable modem user (1 Mbps or better)
Class B Connectivity	Dialup user – Castaway will automatically update if connected to the internet.
Class C Connectivity	Dialup user – Castaway does not automatically connect.

The following table shows every possible update scenario and gives a brief explanation of each. Please note that in all scenarios except for Class C, the prize information and status is updated every 15 minutes.

	Class A Connectivity	Class B Connectivity	Class C Connectivity
Automatically	Checks with server every hour to determine whether or not an update is necessary. Stock quotes and prize info are updated every 15 minutes.	Will check with server every 6 hours to determine whether or not an update is necessary. If user selects, stock quote and prize info will update every 15 minutes.	Six hours after last update, checks to see if user is connected to the internet every hour. If the user is connected, will attempt to connect with server and determine if an update is necessary. If user selects, stock quote and prize info will attempt to update every 15 minutes.
Every XX Hours	Updates every XX hours. Stock quotes and prize info are updated every 15 minutes if user selects to.	Updates every XX hours. Stock quotes and prize info will update every 15 minutes if user selects to.	N/A
Everyday at XX:XX	Updates everyday at XX:XX. Stock quotes and prize info are updated every 15 minutes if user selects to.	Updates every day at XX:XX. Stock quotes and prize info are updated every 15 minutes if user selects to.	N/A
Manually	Castaway updates only when force update. Stock quotes and prize info are updated every 15 minutes if user selects to.	Castaway updates only when forced to. Stock quotes and prize info are updated every 15 minutes if user selects to.	Will ask the user to connect if not connected. Stock quotes and prize info will attempt to update every 15 minutes if user selects to.

3.2 Competitive Comparison

There are currently no other products in the marketplace which currently compete with Castaway. The closest known competitor is PointCast, but it is different in many regards. The reason they are most similar to our product is the mass dissemination of advertisements across the internet. PointCast sends large amounts of data to hundreds of thousands of users over the internet simultaneously. Therefore, our infrastructure and distribution operations will be very similar to theirs. We offer completely different genres of content and display methods. Another product worth mentioning is AfterDark Online, which is extremely similar to PointCast.

Our biggest "threat" comes from potential buy-out. Once our Symbiosis engine is built, it will be the envy of every high tech advertising medium in existence. Symbiosis will be able to pinpoint the exact demographics of who sees our advertisements and display detailed reports which show all the advertising distribution details. In addition, our engine will automatically track commercial inventory, user database, and prize inventory in order to produce all types of reports. Our patent-pending Symbiosis engine could potentially be sold as an advertising solution to hundreds of other companies who specialize in advertising. The whole issue of being bought out, however, is another discussion.

Clearly, there is a fundamental industry need for this sort of complex auditing system. The days of Nielsen television ratings monopoly are gone. Our Symbiosis engine meets all the current standards for advertising auditing. Most importantly, our engine is completely open, meaning that it can be transported from one environment to another. We can enable or disable individual attributes of the engine. For example, we could just as easily use the engine for advertising

auditing without necessarily needing to keep track of the associated prize inventory. The open nature of our system will make Symbiosis very attractive to other companies who may wish to attain this technology.

3.2.1 PointCast Network

The PointCast Network also calls itself a “Personal Broadcasting Network.” It brings content and advertisements to the user’s screen saver as well. However, the main focus by PointCast is news. Their categories (a.k.a. channels) include Business, National News, Regional News, and Technology. Nearly all of PointCast’s content (programs) are provided by third-party media networks or publications such as CNN, New York Times, LA Times, Time, and local papers. The content provided by The PointCast Network is very similar to traditional publishing (like magazines and newspapers), with the exception of their animated ads. The PointCast Network provides three major advantages over traditional publishing to the user:

- Free content (with small and plain advertisements, of course)
- User friendly interface for easy navigation and browsing
- Ability to update on demand

The major disadvantage is that most of the content is text-based. This makes it a worthy medium for news distribution, but little else.

PointCast currently has 1.4 million users, most from a distinct market. The average PointCast user is a 41 year-old, has a household income of \$109,000, has a 69% chance of being college-educated, and is employed as a business professional either managerial or technical.

AN EXCEPTIONALLY AFFLUENT AND INFLUENTIAL AUDIENCE		
	PointCast Viewers	Adult Internet Users
Average Age	41.5	28.8
HHI \$100,000+	38%	20%
College Degree or Greater	69%	42%
Total Professional/Management	71%	48%
Top Management	18%	18%
Source: 1998 PointCast / Mediabart Research Inc. (MRI) Viewer Survey 1998 Spring Mediabart Research Inc. (MRI) National Study		

Remember, there are two main differences between PointCast and Castaway. Having news as their main content comes at a huge price to PointCast, with most of their advertising revenue being siphoned off straight to the news providers. Users also require a lot of bandwidth to continually download news from PointCast servers throughout the day, as opposed to Castaway where a whole day’s worth of content and advertisement is downloaded twice a day. In addition, the advertisements they offer are not much different than the banners typically shown on other web pages because they are small, unintrusive, and do not offer one-to-one marketing. Of course, the other big difference is that we offer the prize/advertisement paradigm which is unique in the industry.

How does PointCast make money? Just as with any broadcast industry, they make it through advertising. They charge by a unit called "CPM," which stands for Cost Per Thousand, a standard measurement for commercial viewership in the industry. Each of their over one million users sees about 400 advertisements per month. Their user base is continuing to grow on a monthly basis. PointCast has a monopoly in the "personal broadcast network" industry.

3.2.2 AfterDark Online

AfterDark Online attempts to mimic the PointCast Network. As second runner in the race to provide push-based news over the internet, AfterDark Online straggles far behind PointCast. AfterDark Online shows its lag with limited content, and use of primitive banner ads. They came to market offering nothing different than PointCast, so there was no compelling reason for users to switch. Berkeley Systems currently has no future plans for AfterDark Online.

3.3 Future Products and Services

Castaway has been designed with the future in mind. Modularity and dynamically updateable features are some of Castaway's key concepts. Updateable features include, content, tickers, ads, channels, and programs.

Castaway's *channels* and *programs* will continually be refined and updated. In the future, as Castaway gains more popularity, and there is more demand for content, a broader set of channels will become available to viewers. A potentially new set of channels include "News," "Artistic," "Nature/Science," and "Cultural/Religious." More channels can be added (and removed) depending on the viewers' demand.

News is a *channel* which Individual Network can ultimately outsource. The challenge within this category is to produce animated headline news, using text animation and light graphics, that is both appealing and entertaining. A great outsource potential would be to allow CNN to produce daily news content for display on Castaway; CNN would incur all production cost, and in return, would be permitted a hyperlink to their web site. Example *programs* for this *channel* include "Local News," "National News," and "Global News."

The artistic *channel* contains extremely unique content that viewers will probably not find anywhere else. These include photo portfolios, animated poetry, and any other creative artsy creations. Example *programs* for this *channel* include "Poetry," "Photography," and "Graphics."

Nature and science will contain informative tidbits which parallels the television networks "The Discovery Channel" and "Animal Planet." There will be thematic content such as "Did you know...?" and "Have you even wondered...?" Similar to the news category, Individual Network, Inc. will be able to outsource the content displayed within this category to a third party media vendor such as "The Discovery Channel," and in return, they will gain a hyperlink to their web site. Example *programs* for this *channel* include "Did you know...?", "Animals" (may contain *sub-programs*), "Wings," and "Space."

The cultural/religious *channel* will be targeted towards several niche markets. Some samples of the cultural/religious category include, African-American history, Asian-American history, American history, biblical quotations, biblical stories, Hinduism, Christianity, etc. Example *programs* for this *channel* include "Christianity," "Hinduism," "African-American," and "Asian-American."

We can also take further advantage of our knowledge about the user. For example, we know what city they live in, and we know what time of the year it is. This would be ideal for a "Gardening" channel. This channel could tell users what plants or flowers should be planted in their area for that particular time of the year. We could also tie it into the weather forecast to warn users to protect their plants from an impending freeze. Once again, we cannot overemphasize the new doors that are opened up because of the two-way communication that is taking place. "Interactive Television" is often an abused term. It does not have to mean that the user is constantly clicking on the screen. It means, in our case, that the "television" knows all about the user, and can enhance the viewing experience.

"Edu-tainment" will be an extremely popular *channel* among the young. The concept of "edu-tainment" is not new, but can now be fully exploited through Castaway. This category will be aimed towards the family. The educational content will be broken down into age group, and further collapsed into subject. An example of this break down is as follows:

Age Group 2-7
Alphabet
Numbers
Age Group 8-13
General Mathematics
World History
Age Group 14-18
SAT Level Mathematics
SAT Verbal
Algebra
Geometry
Calculus
Chemistry

The above table can be used as *programs* and *subprograms* within the "Edu-tainment" *channel*.

Of course, these other "channels" are only examples of new content we could implement in the future. Some of these smaller target markets would be attractive to certain advertisers. Once we start to add more channels, we will be able to target the advertisements to more defined groups of people. For example, if we have advertisements for a revolutionary kind of peat moss, we would only show them to users who are watching the "Gardening" channel.

There is one more potential idea which is a departure from the current stream of thought. Soon after the release of Castaway to the public, a feature to send a "media-gram" will be implemented. A "media-gram" is an electronic greeting card which can be sent to another Castaway user. The

sender will be able to create and customize the greeting card from the Individual Network web site. The web site will have several "wizards," or pre-made greetings, that allow users to customize and send their cards. When a user receives a media-gram, it will be presented as a full screen animated "Birthday," "Get Well Soon," or "Merry Christmas," card. It will be personalized and unique. The "media-gram" will display at a much higher frequency than other content until the viewer selects to do away with it.

As you can plainly see, there is no limit as to the number and variety of the things Castaway can do. This is what is meant by an "open-ended architecture." Once the engine is built, ideas such as "media-gram" can be very easily implemented. Castaway is limited only by the creativity of the content providers.

4.0 Market Analysis

Individual Network, Inc. focuses on the North American markets, both business and home. These locations require an internet connection to receive our broadcasts.

4.1 Industry Analysis

The internet broadcast industry is still in the fledgling stage. As you well know, the internet marketplace changes on a month by month basis. The first section talks about the amazing growth of the internet as an information and advertisement distribution mechanism. The second section discusses how our broadcast implementation will be unique.

4.1.1 Internet Marketplace

More and more people are spending significant portions of their time on the internet, and this trend will only grow over the next few years. As droves of people begin moving to the internet for entertainment and news, the preponderance of advertising will move with them.

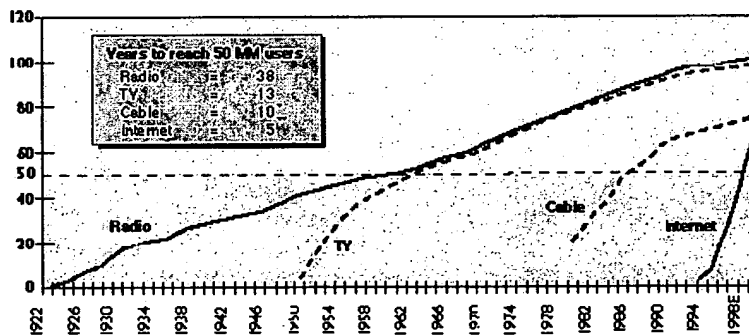


Figure 4.1 – The fastest growing media outlet in history, having reached 50 million users in its first 5 years (beating out cable which took 10 years, and broadcast television which took 13 years).

* The launch of HBO in 1976 was used to estimate the beginning of cable as an entertainment/advertising medium.
Though cable technology was developed in the late 1940's, its initial use was primarily for the improvement of reception in remote areas.
** Morgan Stanley Technology Research Estimate

In 1998, there was \$1.9 billion spent on online advertising, as opposed to \$1.6 billion spent on traditional outdoor advertising. Jupiter, an advertising agency, estimated that online advertising revenue would reach \$7.7 billion by 2002. Advertisers know very well about all of the advantages of advertising on the internet. There is a growing trend to spend more and more money on internet advertising. With a medium growing so fast, the companies that get involved early have a definite advantage.

4.1.2 Unique "Push" Implementation

Today, there still exists a schism between two competing technologies for information distribution over the internet. The first, and more traditional, method is through "pull" technology. This "pull" technology requires the user to actively click and follow links which are of particular interest. This is very much considered user-driven information gathering.

The other, newer school of thought, involves "push" technology. This only requires the passive attention of a user, and the information is presented to him, very much like television. The user may usually select what sort of information is sent to him during a one-time setup, but thereafter, he remains a passive observer. The Wall Street Journal reports that push technology will result in \$4.6 billion in revenue by the year 2000. There is no doubt that push technology is the next trend in the industry.

These two technologies are currently in competition for the most effective form of marketing. Our competition only lies with those companies providing the "push" technology. Our main competitor, PointCast, uses an internet connection to send data to the user's computer. They feature news content which is complimented with advertisements. These advertisements are typically static, and offer nothing other than a billboard on the side of the highway. PointCast currently has a monopoly in implementing push technology for advertising purposes. Peter Storck, group director of online advertising at Jupiter, says "there are not that many opportunities for an advertiser to buy push. . . You can buy PointCast and you can send direct e-mail, but that at the moment is about it. . . Advertisers like the early signs of push. . . It's more intrusive and it's more like TV."

Because we are using our own Symbiosis technology to make every advertisement offer quite a bit more, there are no real competitors. As was already explained, our technology makes every advertisement special by giving the viewer a chance to win a prize without their involvement. We also show the current entries to the prize, recent winners, and other prize related information. Nothing like this has ever been done before.

4.2 Target Markets

Being a broadcast company, our target market is huge and diverse. The particular content we offer has target audiences, but our product as a whole does not. For example, what is the target market of NBC? Their target market is essentially everyone with a TV. The individual programs, like Frasier for example, have certain target markets.

During initial rollout of our product, we will have five distinct genres of content. Therefore, we will be targeting five distinct markets. Most importantly, our product is entertainment-based, meaning all of the target markets fall under the realm of "entertaining content," rather than news or educational programming.

4.2.1 Sweepstakes / Prize hunters

The most unique feature of our product is the “prize factor.” There is a certain segment of the population who enjoys “winning” prizes. These people typically play lotto, gamble, sign up for freebies, play bingo, or enter contests where prizes are awarded. They vary in age and income levels, although the upper income levels are generally less interested in winning prizes.

Our engine makes entering “sweepstakes” easier than ever. Once the user installs the software and enters his or her name and address, no more filling out of entry sheets or forms is required. Their one time entry of personal information makes them candidates for thousands of prizes per year, with new ones being given away everyday. Castaway will also appeal to people who like to win prizes, but are too busy or lazy to fill out “contest information.” After the program is installed, we will have all the information required to award the prizes.

The prize incentive will take off once people accept the idea that “Hey, the longer I leave on my screen saver, the more chances I have to win!” We know that not everyone is interested in winning free prizes, but the ability is there nevertheless. Most importantly, this is the first time that viewers have ever had a direct incentive to watch commercials.

4.2.2 Comics / Cartoon fans

The next target market includes those people who enjoy reading comics and cartoons. The Web Magazine recently wrote, “Comics and the Internet are lost media siblings on the verge of rediscovering one another once and for all.” We will provide a steady stream of new comics and cartoons to the user’s computer every day over the internet. Our engine offers animated content, which is not offered by any of our competitors. Comics like Dilbert, the Far Side, Southpark, Cathy, and other Marvel Comics have an enormous following. The comic content will attract a slightly younger crowd, although all of the comics and cartoon strips are written for an adult-aged audience. Dilbert appeals to 25-45 year-olds who work in the computer industry. Far Side, on the other hand, appeals to almost anyone over the age of 20. We will eventually offer a variety of different animated comic strips to appeal to many different demographics.

4.2.3 Movie buffs

The third grouping of content will focus on movies. Our movie facts, upcoming previews, and interesting Hollywood tidbits will be interesting to certain people. That is essentially the same target market that the “E! Entertainment Network” is after. There are also several magazines which focus on nothing but the movie industry. Ours will be markedly different because of the live updates over the internet everyday. People in this target market typically enjoy being on the cutting edge of industry news, previews, and happenings. We can provide all of these updates live over the internet right to their desktops.

4.2.4 Sports fans

Castaway features a sports score ticker along the bottom of the screen that will be constantly updated with sports scores. We will offer NFL, NBA, NHL, MLB, NCAA Football, and NCAA Basketball. People who enjoy having live updates or short recaps will enjoy this feature. This will appeal to mainly males from the 20's to 40's.

4.2.5 Stock watchers

Investors enjoy seeing live stock updates. With our engine, they can enter up to 100 of their favorite stocks or mutual funds to track. The current prices will be displayed along the bottom of the screen in the ticker. The stock ticker, along with the sports ticker will continue to run even while the advertisements are being shown.

Forty million households in the United States own stocks or mutual funds, according to Forrester Research, out of which 1.5 million had online, electronic trading accounts by the end of 1996. That figure was over 3 million by the end of 1997, and to reach 10 million by the turn of the century.

4.2.6 Other target markets

As you can see, our engine can accept any kind of content for broadcast. We can reach any demographic of users simply by using our modular engine to "plug-in" the kind of content which appeals to them. For example, one group of users (affluent wine connoisseurs) may be interested in seeing facts about local California wines, while another group (grade school children) is interested in multiplication tables.

The internet currently has 147 million users, 52% of which are in the US. Every single person on the internet will have free access to our application. The "Personal Broadcast Network" slogan means that any kind of person will potentially find something of value in Castaway.

4.2.7 Other segmentation methods

Our markets can also be segmented by their internet connection speed. Of course, the faster -- the better. People with office internet connections generally have extremely high-speed internet connections, capable of receiving large amounts of data quickly. Home internet users generally have slower internet connections. As time goes on, and the proliferation of cable modems continues, there will be no difference between home and business internet connections. By the year 2000, the cable industry hopes to have cable modem services available to about 10 million households across Canada and the United States. Once a user has a high-speed connection like this, the amount of data that can be transmitted in one second jumps by a factor of 100. As time goes on, we will be able to offer more and more content as the average bandwidth increases.

4.3 Future Scenarios

Our biggest "threat" comes from potential buy-out. Once our Symbiosis engine is built, it will be the envy of every high tech advertising medium in existence. Symbiosis will be able to pinpoint

the exact demographics of who sees our advertisements and display detailed reports which show all the advertising distribution details. In addition, our engine will automatically track commercial inventory, user database, and prize inventory in order to produce all types of reports. Our patent-pending Symbiosis engine could potentially be sold as an advertising solution to hundreds of other companies who specialize in advertising. The whole issue of being bought out, however, is another discussion.

Clearly, there is a fundamental industry need for this sort of complex auditing system. The days of Nielsen television ratings monopoly are gone. Our Symbiosis engine meets all the current standards for advertising auditing. Most importantly, our engine is completely open, meaning that it can be transported from one environment to another. We can enable or disable individual attributes of the engine. For example, we could just as easily use the engine for advertising auditing without necessarily needing to keep track of the associated prize inventory. The open nature of our system will make Symbiosis very attractive to other companies who may wish to attain this technology.

4.4 Regulatory Restrictions

There can often be legal complexities with internet ventures. However, we have made a careful analysis to ensure that our product meets all of the regulatory restrictions. The distribution of our software is free over the internet. This fact alone will enable our prize giveaways, the most potentially controversial feature, within restrictions. In order to win a prize, people must not be forced to "buy" a product. Our "no purchase required" prerequisite keeps Individual Network free from any legal harangues.

Since the internet is a worldwide phenomenon, we will ensure that all potential prize winners come from North America. Sending prizes overseas is out of the question until we can establish a presence in other countries. That is not within the scope of the first few years of the company.

5.0 Strategy and Implementation

➤ **Emphasize our special advertisement engine**

This feature sets us apart from our competitors. No one else has the ability to emulate our advertisement and sweepstakes engine combined with one-to-one marketing.

➤ **Focus on entertaining high-quality content**

In between the commercials, we are focusing only on the upper echelon content. We will cater to higher standards that our viewership responds to (according to the market analysis).

➤ **Differentiate ourselves from competitors**

Because we truly do have a unique paradigm, we can make clear divisions between our product and our competitors.

5.1 Marketing Strategy

Our marketing strategy is simply to emphasize our strengths and uniqueness over our competitors. In the world of internet development, promoting your product as unique becomes important.

We have over \$1.7 million allocated to marketing efforts for the first three years of Castaway. This is an extremely large marketing budget which we can use to launch a widespread advertising campaign on a large scale. A majority of the profits we make above and beyond our projections will be funneled back into marketing coffers.

Another key to the success of our company is to achieve market visibility through strategic partnerships. Because we are a broadcast company, we can better secure market share by associating our company with other entities that have already gained the public trust.

Ideal partnerships would include advertisers, advertising companies, or internet portals. The direction we go is entirely dependant upon the relationships already established by the officers of the company. The company is currently seeking an experienced CEO who might be able to bring these relationships and strategic partnerships to the table.

5.1.1 Public Relations Strategy

Publicizing a product to the media is key. Media provides third party endorsement of our product, and is a key source of information for the consumer. We would only use a public relations firm when in need of a press release and press kits. Contact with a freelance public relations professional would take place three months prior to the release of the product, so that an exact strategy can be planned for the week of release.

5.1.2 Advertising Strategy

Please note that this section refers to the advertising that Individual Network will be doing so people know about our product. The promotion of Castaway is essential to its success.

An advertising firm would be utilized to create a campaign for the company. We would hire a large advertising firm to help us establish a full blown advertising campaign. We would target magazines and the internet as our main mediums of advertising, but we would leave the specifics to the advertising agency. The nature of our company makes this an interesting effort. Since we are, in essence, a company which promotes advertising, and we are hiring an advertising company to advertise our advertising medium, it establishes a dynamic relationship. I know that sounds confusing, but it turns out to be a mutually beneficial relationship. Most likely, down the road, these same major advertising agencies will be contacting us to run their advertisements. So, a good relationship with upper management is key. The better they come to understand the unique nature of our company, the more likely they will be to promote us as an advertising alternative to the companies they normally deal with.

In fact, as an aside, it is not unlikely that these advertising firms would like to do the exact same thing we are doing. Advertising agencies do not own television stations or radio stations to disseminate their ads, so they must pay other media channels to run the advertisements. If they had a division within the agency to disseminate these advertisements through the internet (a comparatively low-cost solution), they surely would. Because our overhead is so low compared to these other media outlets, we can offer significantly cheaper prices to run the advertisements. There is more on this idea in the next section.

5.2 Sales Strategy

Our sales strategy is simple. We can sell our advertising space for less than any other medium, while reaching comparable audience numbers and demographics.

This section discusses the numerous unique advantages that Castaway can offer to advertisers. Besides the cost savings advantage, we offer one-to-one marketing, perfect delivery, full screen animated advertisements, and a chance to give away samples of their product.

Before delving into each of these areas, we should discuss the nature of advertising. Companies pay to have their advertisement seen by a certain number of people. When an advertisement is seen by one person it is called an "impression." Many advertising contracts are based on "impressions." They read very much like, "McDonalds will pay you \$700,000 if you can guarantee this advertisement gets 1 million impressions." The contracts, are of course, more complicated, but that is the crux of it.

5.2.1 Low Overhead

It costs our company less to get one impression than any other medium, because of our low overhead. We can pass this savings along to the companies who wish to advertise with us.

Advertisers would reach the exact same types and number of people they desire at a significantly cheaper price.

Why is our overhead so low? One of the most significant overhead costs for companies that receive most of their revenue through advertising is the salespeople. For example, Doubleclick (a web-banner advertising company that serves over 1500 web sites) has over 375 salespeople! We have developed an ideal solution to curb this unnecessary overhead cost, because a majority of the advertising sales can be automated.

Advertisers who wish to buy an advertisement on Castaway will be able to go to a special, secure e-commerce section of our web site. There, advertisers will have a "shopping cart" paradigm where they can buy advertising. Different quantities of demographics will be the product that they can place in their cart. For example, Del Frisco Steakhouse may want to buy an advertisement with Castaway, so they would come to our website and go to a special secure area. After they log in with their secure ID and password, they would be presented with an empty shopping cart and several "products" to choose from. They choose to put 30,000 men from the ages 40-55 who live in Dallas into their shopping cart. That product costs \$4500. Then they choose to add to their cart 10,000 women who are married, live in Dallas, and who have an income greater than \$50,000. That product is expensive, and will cost Del Frisco's Steakhouse \$7000. Now that they have filled their shopping cart with all the products they want, they place their 75K advertisement into a special section of the order form, then checkout. The advertisement will then be automatically distributed to all of the clients via the Symbiosis engine.

This shopping cart paradigm should be able to fulfill 90% of the advertisement orders we receive. We will still, of course, have advertising salesman to handle the "big" accounts like American Airlines, Home Depot, and other advertisers who have special needs.

Will advertisers like to use this innovative style of buying advertising? They may be a little reluctant at first, but we will offer significant discounts if they order online. Also, advertisers will see how cheap our rates are because they don't have to go through an unnecessary middle-man.

A second minor impact on our low overhead is the cost of our content. Compared to other broadcasting companies, the cost of our content is relatively inexpensive. For example, NBC has to buy their programming, and shows like ER, Frasier, Primetime Live, Meet the Press, etc, are very expensive. They have to pass this cost along to the advertisers to keep their margins respectable. Other internet broadcast entities have to buy expensive content as well. Pointcast must buy news stories and content from CNN, sports from ESPN, investment stories from the Wall Street Journal, etc. Broadcast.com must buy content from Rush Limbaugh, Howard Stern, Leonard Peikoff, etc. Our content will also be expensive, but not quite as expensive as these other broadcast entities.

5.2.2 One-to-one Marketing

No other broadcast entities have the ability to do one-to-one marketing. Our approach to this was discussed in section 3.1.4. Advertisers will be able to visit our web site and see exact kind of demographics they would like to reach. We can make a very compelling case to advertise with us.

For example, Pennzoil (or the ad agency representing Pennzoil) could come to our web site and see the power our delivery mechanism. They could see that we have 230,000 men between the ages of 35 and 50 who drive sports cars. Well this is exactly the kind of people that Pennzoil wants to reach. They will also see that they can reach these people at a price much cheaper than our competitors. Plus, they know that the advertisement will only be seen by people who fit this demographic.

One of the strengths of our Symbiosis engine is its precise logging ability. Symbiosis can log all of the pertinent data that in which advertisers are interested. We can see exactly how many advertisements have been shown for any given time period. Please note that this is not an "estimate" as with Nielsen ratings, but an exact figure. These statistics are continually updated on private web pages that advertisers can visit at any time. The *Symbiosis* engine dynamically builds these ad-hoc reports whenever they are requested. Each advertiser would have their own special section of our web site where they could come view live ratings data.

5.2.3 Perfect Delivery

We deliver exactly what we promise – something no other broadcast entity can guarantee. If an advertiser wants their advertisement to be seen by 34,000 teenage boys, then we will deliver exactly that. We will not overdeliver or underdeliver. Once the 34,000th impression has been made, all of those advertisements will no longer be shown.

Many other broadcast entities have chronic problems with over and underdelivery. For example, CNN may sell 400,000 impressions on Larry King Live. After Nielsen ratings arrive and are compiled a few days later, they might discover that they fell 30,000 impressions short. This means they will have to run the advertisement again. The second time, the advertisement may have made 150,000 impressions, meaning that they have now overdelivered by 130,000 impressions. CNN will have to "eat" the cost of this overdelivery of inventory. As an aside, this overdelivery cost Turner Broadcasting over \$6 million a year in lost inventory (I was on a project there with Andersen Consulting to implement a commercial scheduling system to help solve that very problem).

Remember, we have immediate feedback from the user's computer telling us when they saw the commercial, so there is no need to wait on inaccurate Nielsen ratings. Our symbiosis engine ensures perfect delivery of all commercials to the intended target audience.

5.2.4 Full-Screen Advertisements

No other internet broadcasting company offers full screen advertisements. Most internet advertisements are small banners that sit on the top of web pages. Our advertisements differ from these in many ways:

Animation: Banner advertisements are sometime use the animated GIF format, which is inferior to the Flash technology we are using. The GIF animations are usually very choppy and short. The entire animation might only last 5 seconds or so, then repeat. Our advertisements, on the other hand, animate continuously in new ways for the full 30 second commercial.

Full Screen: Banners only occupy a small section of the web page. Once the user scrolls down, they disappear. Ours advertisements are full screen and impossible to ignore.

Click-through: Statistics show that people only click on banners around 2% of the time. Our advertisements will assuredly have a higher click-through percentage. Advertisers will also be able to come visit a special web page and see what percentage of users have clicked on the advertisement to hyperlink to their site. Another point that advertisers find alluring is the fact that 32% of PointCast viewers have purchased something on the Web in the last 30 days. That means that 400,000 PointCast users go out and buy items right from their computer at least once a month. The internet makes “impulse purchases” a reality, something that is not possible through regular broadcast television (except the Home Shopping Network). Many times, Castaway will be advertising specific products. If a user clicks on the product, they will be automatically taken to an order form where they can order the specific product. This order form would be maintained on the advertising company’s web site.

5.2.5 Free Samples

Advertisers can use Castaway as a distribution mechanism for any samples or “trail versions” they might want to give away. We could give away these samples as prizes for the advertisement. One advantage to using Castaway as opposed to traditional mass mailings is that we can guarantee that their samples will end up in the hands of the ideal demographic, since only those people will have a chance to win it.

5.3 Sales Forecast

The following tables will illustrate our growth potential.

5.3.1 Industry Example

The basic metric for advertising is the CPM – Cost Per Thousand (Roman numeral M). Today, the CPM on the Web hovers between \$40 to \$70. Similar to the cable industry, the top 50 web sites (out of over 500,000 commercial sites) receive 85% of total advertisement revenues and have an average CPM of over \$50.

The industry example we will use comes from PointCast. The following chart shows their projected revenue for one quarter in 1997. The sources for the numbers are listed below the chart.

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5.3.2 Pessimistic Forecast

The next chart shows the projected revenues of Individual Network in the worst case scenario. There are a few hidden calculations here which are not immediately obvious. All of our calculations were made on the conservative side. First, we are assuming that each viewer would only 36 advertisements each instead of 400, which is how many PointCast shows. Second, we have given an extremely low CPM rate (\$25 instead of the \$55 average in the industry). Third, we have lowered our user expectations. You will notice that we are anticipating 50,000 users at the end of 2000, and 150,000 users at the end of 2001. This is an extremely conservative estimate. Effectively, this model is making the following statement:

If Individual Network only gets one tenth of the PointCast viewers, and if we charge an extremely low rate, and if we only show only 36 advertisements to each user per month, the company will "break even."

Individual Network Advertising Revenue Forecast (Pessimistic)				
<i>Table represents revenue from advertisements.</i>				
Fiscal Year 1999				
	Total Viewers (x1000)	Effective Impressions (x1000)	CPM (Cost per 1000)	Revenue
Q1 98	0	0	\$ 25.00	\$ -
Q2 98	0	0	\$ 25.00	\$ -
Q3 98	0	0	\$ 25.00	\$ -
Q4 98	0	0	\$ 25.00	\$ -
TOTAL		0		\$ -
Fiscal Year 2000				
	Total Viewers (x1000)	Effective Impressions (x1000)	CPM (Cost per 1000)	Revenue
Q1 99	10	1,080	\$ 25.00	\$ 27,000.00
Q2 99	20	2,160	\$ 25.00	\$ 54,000.00
Q3 99	30	3,240	\$ 25.00	\$ 81,000.00
Q4 99	50	5,400	\$ 25.00	\$ 135,000.00
TOTAL		11,880		\$ 297,000.00
Fiscal Year 2001				
	Total Viewers (x1000)	Effective Impressions (x1000)	CPM (Cost per 1000)	Revenue
Q1 00	75	8,100	\$ 25.00	\$ 202,500.00
Q2 00	100	10,800	\$ 25.00	\$ 270,000.00
Q3 00	125	13,500	\$ 30.00	\$ 405,000.00
Q4 00	150	16,200	\$ 30.00	\$ 486,000.00
TOTAL		48,600.00		\$ 1,363,500.00

Figure 5.3 - Individual Network pessimistic advertising revenue forecast (Note: For a full explanation of "Effective Impressions" and exactly how to interpret this chart, see the explanation in section 8.3)

5.3.3 Optimistic Forecast

This next table shows the best case scenario for Individual Network. We are now using the 75 advertisements per viewer model, which is still conservative. In this situation, we envision an ever-expanding viewer base. This is, of course, much more of a reality because we would be able to offer more and more as the revenues are reinvested. These figures also reflect an increasing CPM to the \$50 rate. This rate is still conservative when you consider that average rates will be increasing dramatically over the next few years.

Another interesting thing to point out is the growth of PointCast. PointCast started in February of 1996, and in November of 1997, they had over 1.4 million users. Our projections below are on par with that growth rate. These figures show over \$103 million in revenue the first three years of operation.

Individual Network Advertising Revenue Forecast (<i>Optimistic</i>)				
<i>Table represents revenue from advertisements.</i>				
Fiscal Year 1999				
	Total Viewers (x1000)	Effective Impressions (x1000)	CPM (Cost per 1000)	Revenue
Q1 98	0	0	\$ 25.00	\$ -
Q2 98	0	0	\$ 25.00	\$ -
Q3 98	0	0	\$ 25.00	\$ -
Q4 98	0	0	\$ 25.00	\$ -
TOTAL		0		\$ -
Fiscal Year 2000				
	Total Viewers (x1000)	Effective Impressions (x1000)	CPM (Cost per 1000)	Revenue
Q1 99	100	27,000	\$ 40.00	\$ 1,080,000.00
Q2 99	250	67,500	\$ 40.00	\$ 2,700,000.00
Q3 99	500	135,000	\$ 40.00	\$ 5,400,000.00
Q4 99	1000	270,000	\$ 40.00	\$ 10,800,000.00
TOTAL		499,500		\$ 19,980,000.00
Fiscal Year 2001				
	Total Viewers (x1000)	Effective Impressions (x1000)	CPM (Cost per 1000)	Revenue
Q1 00	1250	337,500	\$ 45.00	\$ 15,187,500.00
Q2 00	1500	405,000	\$ 45.00	\$ 18,225,000.00
Q3 00	1750	472,500	\$ 50.00	\$ 23,625,000.00
Q4 00	2000	540,000	\$ 50.00	\$ 27,000,000.00
TOTAL		1,755,000.00		\$ 84,037,500.00

Figure 5.4 - Individual Network optimistic advertising revenue forecast (Note: For a full explanation of "Effective Impressions" and exactly how to interpret this chart, see the explanation in section 8.3)

5.3.4 Baseline Forecast

Our financial models are not based on either the pessimistic nor the optimistic forecast. It was our judgement to establish a "Baseline Forecast." These tables represent a realistic projection of revenues, based on conservative estimates with our numbers rooted with industry examples. Based on our calculations, we have determined the following:

If Castaway only gets 66% of the PointCast viewers, and if we charge an advertising rate 17% cheaper than PointCast, and if we only show only 48 advertisements to each user per month, the company will make over \$9 million in profit after only 2 years in production.

To find out more about our baseline forecast and the exact calculation, visit the financial section in Section 8.

5.4 Content Sources

The screen itself is split up into two sections. The main screen (about 90% of the screen), and the tickers which run along the bottom. Both contain content information, so they have been split up in this section accordingly.

5.4.1 Main screen

The limits of the amount and types of content in between the advertisements is limitless. However, there are a few items that are definite.

- The content is totally customizable, meaning that users can select what kinds of content they wish to view.
- Content will be updated via the internet daily, so users will rarely see the same content day after day.

It is important to note that all content will be animated on the screen. Unlike other screen savers, where static pictures are placed on the screen, our engine will be able to display content in a variety of ways. This will enable artists to do a variety of manipulations with the content. Currently, the most popular form of animation over the internet is in a format called Flash. Many graphic artists who do their work over the internet already use Flash as their tool of choice. With Flash, artists may create any number of images on the screen, animate them, make them fade in and out, add sound, etc. Because Flash is open-ended, artists have no limits as what their creativity can produce.

One of the most dynamic parts of our software is the ability for the user to select exactly what kinds of content they are interested in. Since all of this content is user customizable, users are assured that they will only see what they are interested in. For example, one user may only be interested in Dilbert and sports, and movie trivia. Another user may only be interested in the Far Side and their stocks quotes. Once again, all of this content is totally free, paid for by the advertising.

We plan on hiring a person whose sole job it will be to attain content. This person will forge relationships with several different companies whom will be providing content. We plan on outsourcing a fair amount of our content, because it will take a full time position to manage and organize these activities.

Our content can also blur the lines between advertising and content. For example, we can have advertisers who supply content in their advertisements. Those advertisements would be sold at a discount, because they are supplying content. Movie studios and production companies are prime examples of this. Paramount, for example, can provide us with 30 second movie previews which are both entertaining, and also serve as advertisements. We will charge these movie studios a discounted rate because they are also providing a service to us.

Another method we are using to attain content is through an innovative contest. Because our software will be in production for the first nine months, we can use that time to "stockpile" content. Every week, on our product web page, we will hold a series of contests where graphic artists and animators from all over the world can make submissions. Each contest will focus on a particular theme. For example, one week we may have a poetry contest, where people will make 30 second animated (with Flash) submissions. All submissions will have the prerequisite that we can show them later at our discretion. The winners will win some nominal cash prize. Our web contest will become the most popular haven for Flash artists on the web. It will be seen as a "gallery" of the best Flash animations that the web has to offer. Our cash incentive program should keep the artists actively making submissions. At the end of the 9 month period, we should have ample content to distribute with Castaway. We can then distribute this content in a miscellaneous "potpourri" category.

Users can also select to have no content whatsoever, which would give them 100% advertisements. This would maximize their ability to win prizes, because the more advertisements they see, the more likely they are to win. There will be a certain percentage of our users who will choose this option.

5.4.2 Ticker

The ticker is a long stream of information which runs along the bottom of the screen. Users may also customize what sort of data they see here. We will have stock quotes available, so users may select which ticker symbols they would like to see. In addition, users may choose to add sports scores from their favorite teams/leagues to the ticker. The types of information we can display along the bottom are limitless as well, but we will start with only those two options.

5.5 Distribution and Support

Obviously, all distribution of software and support will be via the internet. We have two main methods of distribution: the software and the content/ads.

5.5.1 Distribution

The development is discussed in detail in the Operations section.

➤ **The Software**

Our software will be available from several different web and FTP sites. Users will be allowed to download and install our software for free. It is also conceivable that we can distribute our software through traditional channels like computer stores (Comp USA, Egghead, Best Buy, etc.). In that case, we would utilize a third party firm which specializes in software distribution. The price point for that software would be fairly low, probably under \$20. Our intent with the distribution is not to make money, but just to get it in the hands of users. This is the same philosophy employed by all of the successful internet applications current (IE, Netscape, PointCast, etc.).

➤ **The Advertisements and Content**

Once people start up our application, the advertisements and content will be automatically downloaded to their systems via the internet. We will store all of the data on multiple database servers. The updates to the user will be totally transparent. Once the data is sent to the user's system, it is stored locally for the application to use at its leisure. Every time a new advertisement is shown, that user's computer will automatically send our Symbiosis engine a tiny update signal, indicating that another advertisement has been viewed.

5.5.2 Support

We plan to use innovative methods for supporting our software. As is customary with internet-based software, new versions are released every few months. Users, when connected to the internet, will be automatically informed when a new version is available. They will then be allowed to seamlessly install the upgrade over the internet.

Users can report bugs to the company from within the application. When errors occur, the user will have the option to send all of the bug data directly to Individual Network via the internet. That way, we can figure out all of the pertinent registry information we would need to determine the cause of the error. Engineers will collect the list of bugs and address them in subsequent releases of the software.

6.0 Operations

The operations section discusses the development approach and a few of the technical intricacies involved. We currently have an even more detailed design specification, but it has not been fully described in this business plan. Therefore, this section will only discuss the high-level design activities.

6.1 Implementation Schedule

We plan on utilizing the Rational Unified Process for all software development. We (the founders) of the company have used this methodology on several other projects and have seen its effectiveness. The methodology assumes an iterative development cycle to assure the final product is the result of a rigorous design stage. The chart below illustrates the project plan at a high level.

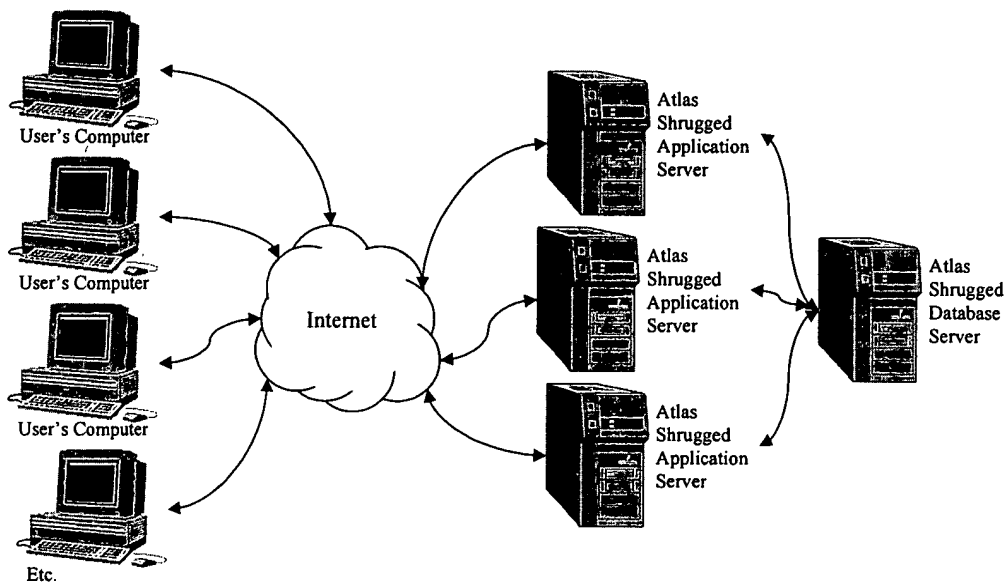
Error! Not a valid link. *Figure 6.1 – Development Lifecycle*

The chart above shows the full development of the project taking approximately nine months from inception to rollout. The breadth of the software is already known and fully scoped, so this nine-month schedule is not overly aggressive. Essentially, the chart shows the analysis phase will begin immediately, followed by an iterative design phase. Approximately halfway through the design phase, implementation of the technical architecture and the application itself begin. This is followed by a brief alpha test followed by a thorough beta cycle. Throughout the latter half of the entire process, production of the web page, the content, and marketing process is taking place.

Project planning and implementation is a fairly basic process to the employees of Individual Network. Please refer to the resume section at the back of the business plan to read about previous implementation projects that are similar in nature. Basically, the development of the Castaway software will be a “piece of cake” because of the caliber and previous experience of our development team.

6.2 Client/Server Model

The highest priority in the design of the Symbiosis engine speed. Essentially, during execution, bits of data travel from the database, through the application server, through hubs and routers, through the web server, through the firewall, over the internet, into the client engine, then it is displayed on the screen. Because there are so many pieces of the architecture, the optimal way to design is to find the bottleneck in the system, then reverse engineer the architecture from that standpoint.



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In all of today's internet applications, the bottleneck is in the client internet connection. The best way to circumvent this bottleneck is to minimize net traffic and packet size. The ideal solution to solve the bottleneck problem is, of course, to make faster connectivity hardware, but that is beyond our control. Consequently, the design of the system will not be focussed on a "thin client," or a "fat client." The optimal client size will minimize the amount and frequency of data that travels through the internet.

At the time when our product is rolled out to the public, Windows 98 or Windows 2000 will be the predominant operating system. One of the flexible strengths of the symbiosis engine will be its ability to be used in the "Windows Background." That is, instead of having static "wallpaper" on the Windows desktop, the background can be used to display dynamic content. This would enable us to show full screen advertisements right to the users' desktop background, before they even go into screen saver mode.

The design is also forward-thinking enough to realize that this bottleneck will no longer be a problem in 2 to 3 years, once consumers increase the speed of their internet connections. Fortunately, our design will still be equally valid because the goal of any internet application should be to minimize network traffic.

6.3 Technical Architecture

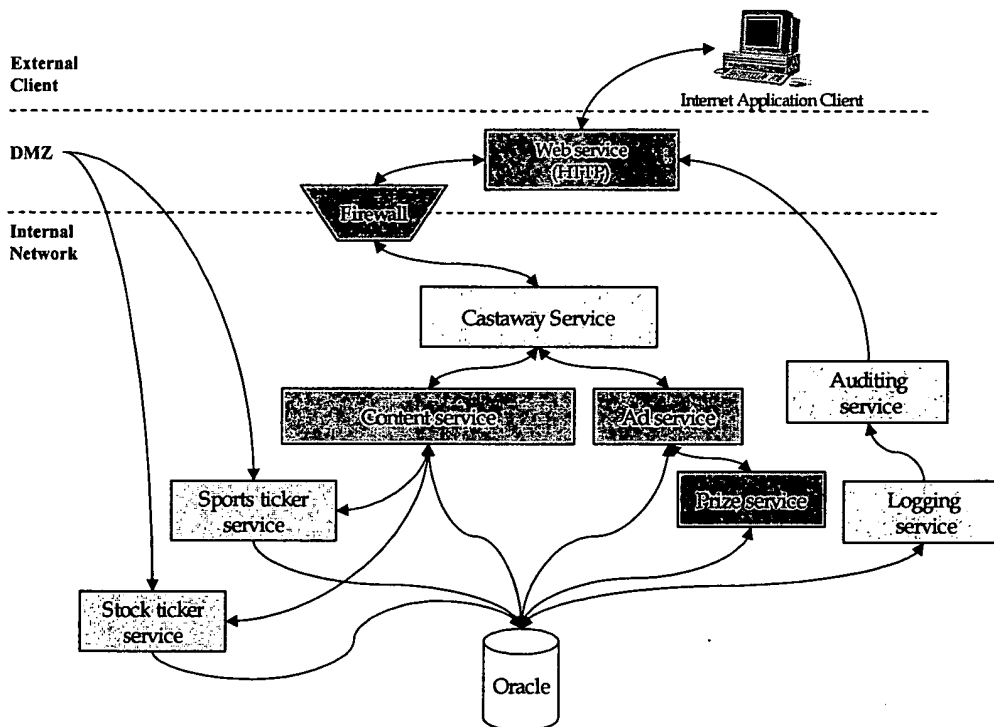
The Castaway technical architecture closely resembles that of other large-scale internet applications. Basically, we have a number of database servers connecting to a number of application servers, all of which connect to a fractional T-1 pipe. A majority of our architecture is focused on the server, because that is where we have the most control.

Our database will either be Oracle 8i or Microsoft SQL Server 7.0. A database broker will sit on the application server, and will administer the concurrent connections to the database. In the analysis of the application architecture, we can determine how the number of concurrent connections required will vacillate depending on the number of users and the time of day.

Certainly, there is nothing magic about our server side technical architecture. The same system has been set up hundreds of times across several different platforms. Where Castaway makes a departure is in the application architecture.

6.4 Application Architecture

Just as with the technical architecture, and majority of the application architecture sits on the server side. The following figure illustrates the various application pieces and how they interact with one another.



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The design of the server-side application architecture revolves around getting data from and to the database. Therefore, this first section will explore the relational database model. Naturally, this is a simplistic view of the database, but the database model is comparably less complex than that of most client server applications.

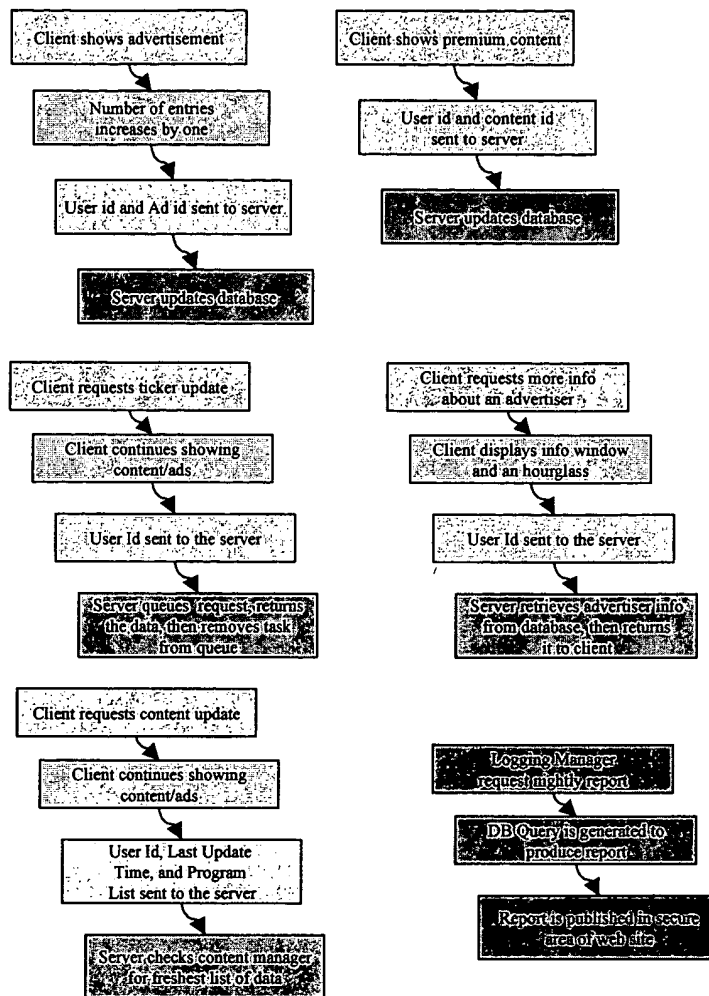
- **Ad table** – contains the following data about an ad: id, name, time, size, prize id
- **Content table** – contains the following data about an ad: id, name, time, size
- **User table** – contains the following data about a user: id, full name, address, demographic data, preferences data, client cache size
- **Prize table** – contains the following data about the prize: id, name, giveaway time, users eligible to win and entries.

The advertising and content manager will be the most code-intensive portion of the architecture. As is the case with all of the managers in the application architecture, they all act on a number of prioritized rules:

```

IF the client makes a server request THEN
  IF the client just watched an ad THEN
    queue an update the prize table HIGH PRIORITY
    queue an update to the ad table LOW PRIORITY
IF the client just watched a piece of content THEN
  queue an update to the content table LOW PRIORITY
  IF the client wants new content delivered THEN
    queue a retrieve preference information HIGH PRIORITY
    queue a retrieve for new content based on preferences HIGH PRIORITY
    queue an update to user table for new info LOW PRIORITY
  IF the client wants new tickers delivered THEN
    queue a retrieve ticker preference information HIGH PRIORITY
    queue a retrieve for new ticker content based on preferences HIGH PRIORITY
    queue an update to user table for new info LOW PRIORITY

```



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The advertising and content manager receives top priority for CPU utilization and database access. Other managers will be invoked at semi-regular intervals, when CPU utilization and total database concurrent users is at a minimum. For example, logging and auditing are effectively batch processes which can occur at any time of the day. By having internal histogram analysis tools, these batch processes can be run at non-peak times.

Because we are following a strict object-oriented design methodology, each of the manager objects will be dynamically instantiated as needed at runtime. We have a certain amount of Castaway-specific logic which must be custom coded, however we will be able to easily incorporate third party DLLs into our application. For example, there are already several third-party reporting architectures which can be easily plugged into our system. We do not plan on

creating custom code for solutions that already exist in the marketplace, as it is always more time/cost effective to purchase the solution.

The client engine will store an archive of content packages and advertisement packages. The following tables show what each content and advertisement package contains. Italics show properties which are continually updated and sent to the server.

Content Package
Animation file type.
Animation filename or ID.
<i>Impressions on the user machine. (Value is reset after every connection to the server.)</i>
"Channel/Program" classification.
Priority level.
<i>Number of HREF clicks the content generated.</i>
Advertisement Package
Animation file type.
Animation filename or ID.
<i>Impressions on the user machine. (Value is reset after every connection to the server.)</i>
List of "Channel/Program" classifications, or "All" classification.
Priority level.
<i>Number of HREF clicks the content generated.</i>
Prize information used for ticker. Information includes the actual prize, quantity, date of drawing, etc.

Every time the Symbiosis engine is connected with its corresponding server, the following information is exchanged (again, this has much more detail in the operations section):

Transmitted from the Client to the Server
Client's ID.
User information, if new or changed. (Includes user profile and connection type.)
Channel/Program List Last Updated Date
Ticker List Last Updated Date
Channel/Program Selection
Ticker Selection
List of Animation Files Existing on the Client and their Properties (Impressions/HREF Clicks)
Transmitted from the Server to the Client
New Channel/Program List (including channel/program priority levels) if Required.
New Ticker List if Required.
List of Animation Files to Delete.
New set of animation files, determined by user's "Channel/Program Selection" and User ID.
Updated ticker information, depending on Ticker Selection.
Primary and Secondary Server if Changed.

7.0 Management Summary

Our management philosophy is based on responsibility and mutual respect. People who work at Individual Network will be in the ideal environment for creativity and achievement.

7.1 Organizational Structure

The team will have 14 employees under 2 equal partners who act as president and vice president. The company will be ultimately headed by an experience CEO who is currently being sought.

7.2 Management Team

Trey Ratcliff, Managing Partner: Mr. Ratcliff has an extensive experience in internet consulting. His background includes several years as part of the Global Internet group within Andersen Consulting. His most notable project included a two year term at CNN where he built a advertisement scheduling software for CNN, TNT, TBS, and other Turner networks in Atlanta. He has since implemented several e-commerce sites on the internet for the communications and health care industry. Mr. Ratcliff has experience in building distributed object-oriented application architectures and in advanced. He graduated from Southern Methodist University with a bachelors in Computer Science, and minors in Math and Public Relations. The full resume is attached at the end.

Denis Khoo, Managing Partner: Mr. Khoo also was a member of the Global Internet group within Andersen Consulting. During his time there, he designed and implemented extranet application for an HMO in Detroit, managed the "Future of the Internet" presentation at Comdex, and an built an Enterprise Solutions Intranet prototype on top of SAP. He has since been an independent consultant where he has built the online grocery store application for Kroger. Mr. Khoo has spent over five years working with C++/Java/Object Oriented development and design skills. He graduated from U.C. Berkeley with a bachelors degree in Computer Science and a minor from the Haas School of Business. The full resume is attached at the end.

7.3 Personnel Plan

In this section, we will briefly describe the various positions at Individual Network.

Technical Lead – This person will be responsible for the overall implementation of the technical aspects of the software and hardware. This position requires experience in implementing large scale internet applications. He will handle all of the work plans, adjust for slippages, etc. The person slated for this position is Russ Pearlman, a manager within Tactica Technology Group and former employee of Deloitte & Touche. Resume is attached.

Lead Client Engineer – This person will be responsible for all the coding efforts on the client engine. He will have a team of other engineers beneath him to assist in the application programming. The person currently slated for this position is Curtis Simmons, who has a combined six years of experience in software development and technical architecture. His

background includes object-oriented analysis, design, development of business applications using a variety of tools such as Rational Rose, PowerBuilder, Sybase, Oracle, and Microsoft SQL Server in 2-tier and/or 3-tiered client server environments. His technical architecture experience involved software architecture design and development, class library creation and maintenance, establishment of development, test, and production environments, source code control, software distribution and deployment, product evaluations, and creation of development utilities. Resume is attached.

Lead Server Engineer – This person will be responsible for all the coding efforts on the server engine. Just like on the client side, this person will have a small team of coders to assist in the application development. The person slated for this position is Martin Gee, a senior architect currently at Level 3 Communications. Martin has vast experience in building custom multi-tier internet architectures, and he has even built and marketed his own ORB. Resume is attached.

Special Projects – This person is in charge of leading all research and development efforts as well as coordinating the logistics of the sweepstakes portion of the engine. This requires someone skilled in logistics, process flows, and a specialty in research. A person already selected for this position is Dr. Kevin Colombo, M.D., who has worked within a special logistics division of Andersen Consulting within the health services division. Resume is attached.

Client and Server Developers – These people are responsible for assisting in the application development. Extensive knowledge of C++ and the Win32 API library is a prerequisite.

Oracle/SQL Server DBA – This person will be responsible for all database administration. They will maintain all of the advertisements and content, and work closely with the server team to optimize the database access. The person selected for this position is Rich Andersen who currently is working on a commercial scheduling system for Turner Broadcasting. Resume is attached.

Network Specialist – This person will be responsible for all of the infrastructure requirements. Since we will be broadcasting data to hundreds of thousands of users simultaneously, the quality of the network is key. Someone with extensive large-scale networking experience is a prerequisite. They will also set up the web servers, firewalls, etc. The person slated for this position is Chad Romero, who is currently working in a special infrastructure group within Andersen Consulting.

Network Administrator – This person will be responsible for administering the LAN at Individual Network.

Secretary/Bookkeeper – This person will be responsible for accounting and secretarial tasks.

Graphic Artist – This person will be responsible for designing all of the graphics which we use such as web page graphics, content animations, application graphics, etc. This person could potentially be an intern from a local art school.

Webmasters – This person will be responsible for maintaining the Individual Network web site. The person slated for this position is Stephen Pillow, who is a consultant with Tactica Technology Group. He has experience building e-commerce web sites for both Level 3 communications and i2 technologies.

Sales Lead – This person will be responsible for selling advertising spots. This is perhaps the most important position on the team. Ideally, we would get someone who currently sells advertising at PointCast or Broadcast.com by making them an offer they cannot refuse. An added bonus would be that they would bring along all of their clients and contacts with them.

Content Lead – This person will be responsible for acquiring all of the content we offer on Castaway. They will negotiate contracts, find new content, categorize, research, etc.

The following table illustrates a majority of our proposed positions and salaries for the first three years:

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	1999*	2000**	2001**
Position/Name	Salary	Salary	Salary
Developer Type Roles			
Technical Lead	\$ 97,500.00	\$ 139,100.00	\$ 148,837.00
Lead Engineer (Client App)	\$ 82,500.00	\$ 117,700.00	\$ 125,939.00
Client Developer I	\$ 60,000.00	\$ 85,600.00	\$ 91,592.00
Client Developer II	\$ -	\$ 50,000.00	\$ 53,500.00
Lead Engineer (Server App)	\$ 82,500.00	\$ 117,700.00	\$ 125,939.00
Server Developer I	\$ 60,000.00	\$ 85,600.00	\$ 91,592.00
Server Developer II	\$ -	\$ 45,000.00	\$ 48,150.00
Database Administrator	\$ 67,500.00	\$ 96,300.00	\$ 103,041.00
Network Specialist	\$ 56,250.00	\$ 80,250.00	\$ 85,867.50
Network Administrator	\$ -	\$ 45,000.00	\$ 48,150.00
Webmaster	\$ 45,000.00	\$ 64,200.00	\$ 68,694.00
Webmaster Intern	\$ 11,250.00	\$ 16,050.00	\$ 17,173.50
Other Roles			
CEO	\$ 90,000.00	\$ 128,400.00	\$ 137,388.00
President - T.R.	\$ 75,000.00	\$ 107,000.00	\$ 114,490.00
Vice-President - D.K.	\$ 75,000.00	\$ 107,000.00	\$ 114,490.00
Special Projects	\$ 37,500.00	\$ 53,500.00	\$ 57,245.00
Bookkeeper	\$ 26,250.00	\$ 37,450.00	\$ 40,071.50
Graphic Artist	\$ 30,000.00	\$ 42,800.00	\$ 45,796.00
Content Lead	\$ 37,500.00	\$ 53,500.00	\$ 57,245.00
Sales Lead	\$ 75,000.00	\$ 107,000.00	\$ 114,490.00
TOTAL:	\$ 756,562.50	\$ 1,579,150.00	\$ 1,689,690.50

8.0 Financial Analysis

THE PROJECTED FINANCIAL STATEMENTS CONTAINED HEREIN (THE "PROJECTED FINANCIAL STATEMENTS") ARE PRESENTED FOR THE PURPOSES OF ILLUSTRATION ONLY AND MAY NOT BE TREATED AS PREDICTIONS OF FUTURE RESULTS. ANY REPRESENTATIONS OR PREDICTIONS, WHETHER WRITTEN OR ORAL, AS TO THE AMOUNT OR CERTAINTY OF ANY PRESENT OR FUTURE CASH OR OTHER BENEFITS THAT WILL RESULT FROM AN INVESTMENT IN THE SECURITIES OFFERED HEREBY IS PROHIBITED AND MAY NOT BE RELIED UPON. THE ILLUSTRATIONS INCLUDE ESTIMATES BASED UPON ASSUMPTIONS WHICH ARE MADE IN GOOD FAITH AND WHICH THE COMPANY BELIEVES TO BE REASONABLE BUT WHICH MAY PROVE TO BE INACCURATE. THE ILLUSTRATIONS ARE SUBJECT TO MANY VARIABLES, MANY OF WHICH CANNOT BE PREDICTED WITH ANY DEGREE OF ACCURACY. THEREFORE, THE ACTUAL RESULTS ACHIEVED CAN BE EXPECTED TO VARY FROM THE ILLUSTRATIONS, AND THE VARIATION MAY WELL BE MATERIAL. THE COMPANY BELIEVES THAT THE ASSUMPTIONS ON WHICH THE ILLUSTRATIONS ARE BASED ARE REASONABLE AND THAT THE ILLUSTRATIONS ARE A MATHEMATICALLY CORRECT COMPILATION OF THE ASSUMED RESULTS. THE FINANCIAL ILLUSTRATIONS WERE PREPARED BY THE COMPANY AND WERE NOT COMPILED, REVIEWED OR EXAMINED BY INDEPENDENT ACCOUNTS OR LEGAL COUNSEL.

8.1 Stock

Individual Network currently has a total of 4,000,000 shares of common stock outstanding, with an additional 1,500,000 common shares reserved for employee and consultant stock options, and 275,000 shares reserved for noteholders' warrant common stock.

8.2 Important Assumptions

Our financial analyses rely on several key assumptions. These key assumptions, when altered will dynamically update all of our financial statements. A majority of the sensitivity analysis may be performed through modification of these key assumptions. For example, if we increase the percentage of advertisements shown from 25% to 30%, it has dramatic results in the revenue.

Some of the numbers below have enormous "multiplier effects" on the revenue and expenditure models. These "multiplier" numbers are based on current industry examples, and we kept them extremely conservative. The most important number is the "Average number of hours which users will have their screen saver active in a month." The average for PointCast is 8 hours.

Now, in a 8 hour period, we will be able to display 960 30-second segments. We can also say that this is the same as 960 total impressions, in the sense that "impressions" merely means a 30-second spot. We multiply the 960 total impressions by a *deployment modifier* of 20%. What does that mean? Well, just because a screen saver is up for 8 hours a month, it does not mean

that the user is watching it for 8 hours. They may walk away from their computer, be eating lunch, etc. This 20% deployment factor is the same number used by ABC Interactive, a company which does third-party auditing of online advertisements.

So, now we say that there will be 192 30-second segments the user will actually see (a.k.a. 192 *effective* impressions). Another way of saying this is that the average user will be watching their screen saver for about one and a half hours per month. During that time the screen saver will show 25% advertisements, 25% movie content, and 50% comics. In other words, we are saying that the average user will only see 48 advertisements per month, a number which is still extremely conservative. The chart below shows these assumptions and others.

Error! Not a valid link.*Figure 8.1 – Important Assumptions*

8.3 Baseline Forecast

The following chart represents our baseline forecast advertising revenue model. It is based on the assumptions above. Here is a short explanation of what is going on. Take Q1999 for example. We are saying that in the first quarter of 2000, Castaway will have 10,000 users. Each user will have about 48 effective advertising impressions per month, making a total of 144 for the quarter. When 144 is multiplied by the number of users, it becomes 1.44 million effective impressions delivered. At a rate of \$30 (which is below the PointCast rate of \$36), there will be \$43,000 in revenue for the first quarter.

Individual Network Advertising Revenue Forecast (<i>Baseline</i>)				
<i>Table represents revenue from advertisements.</i>				
Fiscal Year 1999				
	Total Viewers (x1000)	Effective Impressions (x1000)	CPM (Cost per 1000)	Revenue
Q1 98	0	0	\$ 30.00	\$ -
Q2 98	0	0	\$ 30.00	\$ -
Q3 98	0	0	\$ 30.00	\$ -
Q4 98	0	0	\$ 30.00	\$ -
TOTAL		0		\$ -
Fiscal Year 2000				
	Total Viewers (x1000)	Effective Impressions (x1000)	CPM (Cost per 1000)	Revenue
Q1 99	10	1,440	\$ 30.00	\$ 43,200.00
Q2 99	50	7,200	\$ 30.00	\$ 216,000.00
Q3 99	100	14,400	\$ 40.00	\$ 576,000.00
Q4 99	150	21,600	\$ 40.00	\$ 864,000.00
TOTAL		44,640		\$ 1,699,200.00
Fiscal Year 2001				
	Total Viewers (x1000)	Effective Impressions (x1000)	CPM (Cost per 1000)	Revenue
Q1 00	250	36,000	\$ 50.00	\$ 1,800,000.00
Q2 00	500	72,000	\$ 50.00	\$ 3,600,000.00
Q3 00	750	108,000	\$ 50.00	\$ 5,400,000.00
Q4 00	1000	144,000	\$ 50.00	\$ 7,200,000.00
TOTAL		360,000.00		\$ 18,000,000.00

Figure 8.2 - Advertising Revenue Forecast

Additionally, we will also get revenue from one of our content sources. Because one of our content source is for "Movie Previews" or "Movie Buffs," our content will come from movie production companies. Because this content is a mixture between content and advertising, we offer this inventory at a greatly reduced CPM. For example, Paramount may put together a full screen preview of the new James Bond movie. They can provide us with this content for the extremely low rate of a \$10 CPM. Another example may be movie trivia which is "brought to you by Paramount Pictures." The following revenue chart illustrates the income generated from this movie content.

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Figure 8.3 - Movie Revenue Forecast

One of our biggest expenses will be “purchasing” the content. We will purchase the content via the same method we are making revenue, by using CPM. This is somewhat of a confusing concept, so here is some further explanation. The content will be shown to a variable number of people. The entities from which we purchase the content will want to know how many people are being shown the content, and they will expect comparable remuneration. For example, Dilbert charges the New York Times more to run their comic strip than they charge the “Akron Chronicle,” because of the size of distribution. Our model follows the same paradigm, because we, in essence, are providing the same distribution service as newspapers. The following chart shows the breakdown of our content expenses.

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Figure 8.4 - Content Liability

8.4 Projected Financial Statements

SET FORTH BELOW ARE THE PROJECTED FINANCIAL STATEMENTS, BASED ON CERTAIN ASSUMPTIONS AND SUBJECT TO THE NUMEROUS RISKS RELATING TO THE OPERATIONS OF THE COMPANY. THE ILLUSTRATIONS ARE INCLUDED TO GIVE A PERSPECTIVE INVESTOR AN UNDERSTANDING OF THE POTENTIAL RESULTS OF OPERATIONS OF THE COMPANY BASED ON VARIOUS ASSUMPTIONS. NO ASSURANCE CAN BE GIVEN THAT ANY OF THE RESULTS DESCRIBED IN THE ILLUSTRATIONS WILL PROVE TO BE ATTAINABLE.

- (a) NO ASSURANCE OF ALL ASSUMPTIONS. THE FINANCIAL ILLUSTRATIONS MUST BE READ WITH THE UNDERSTANDING THAT THERE CAN BE NO ASSURANCE THAT ALL ASSUMPTIONS CONSIDERED IN THE PREPARATION OF THE ILLUSTRATIONS WOULD IN FACT OCCUR OR BE APPLICABLE. WHILE MANAGEMENT BELIEVES THAT SUCH ASSUMPTIONS TO BE REASONABLE, MANY OF SUCH ASSUMPTIONS ARE MERELY MANAGEMENT'S CURRENT BEST ESTIMATE OF WHAT THE ACTUAL RESULTS MIGHT BE AND, THEREFORE, ARE HIGHLY UNCERTAIN AND SUBJECT TO CHANGE. NOT ALL THE ASSUMPTIONS UNDERLYING THE FINANCIAL ILLUSTRATIONS HAVE BEEN SET FORTH HEREIN. PROSPECTIVE INVESTORS WHO WISH TO INQUIRE AS TO THESE OR ANY ADDITIONAL ASSUMPTIONS SHOULD CONTACT THE COMPANY. BECAUSE THE NUMBER AND RANGE OF VARIABLES AND ASSUMPTIONS INVOLVED IN ILLUSTRATIONS OF THIS NATION, NO REPRESENTATION IS MADE THAT THE ILLUSTRATIONS ARE OR WILL BE ACCURATE TO ANY DEGREE.
- (b) NO INDEPENDENT VERIFICATION. THE ILLUSTRATIONS HAVE NOT BEEN COMPILED, REVIEWED OR EXAMINED BY INDEPENDENT ACCOUNTANTS OR BY LEGAL COUNSEL. THE COMPANY BELIEVES THAT THE ASSUMPTIONS ON WHICH THE ILLUSTRATIONS ARE BASED ARE REASONABLE AND THAT THE ILLUSTRATIONS ARE A MATHEMATICALLY CORRECT COMPILATION OF THE ASSUMED RESULTS. NEITHER INDEPENDENT ACCOUNTANTS, LEGAL COUNSEL NOR OTHER PROFESSIONAL ADVISORS ENGAGED BY THE COMPANY ASSUMES ANY RESPONSIBILITY WITH RESPECT TO THE ACCURACY OF THE ILLUSTRATIONS.

NO ASSURANCE CAN BE GIVEN THAT ANY OF THE ASSUMPTIONS UNDERLYING THESE ILLUSTRATIONS WILL PROVE TO BE ACCURATE OR THAT THEY WILL BE APPLICABLE TO ANY PARTICULAR INVESTOR. IT IS THE RESPONSIBILITY OF EACH INVESTOR AND HIS ADVISORS TO REVIEW THE ILLUSTRATIONS IN LIGHT OF THE UNDERLYING ASSUMPTIONS AND TO ASCERTAIN THEIR RELIABILITY AND THEIR APPLICABILITY TO THE INVESTOR.

9.0 Appendix

9.1 Resumes

The resumes are attached on the following pages.

9.2 Other tables used in financial analysis

Pro-Forma Income Statement

	Q1 1999	Q2 1999	Q3 1999	Q4 1999	Q1 2000	Q2 2000	Q3 2000	Q4 2000	Q1 2001
Revenue	\$	\$	\$	\$	\$	\$	\$	\$	\$
Operating Expenses:									
Cost of Revenue	\$	\$	\$	\$	\$	\$	\$	\$	\$
Research and Development	\$	\$	\$	\$	\$	\$	\$	\$	\$
Sales and marketing	\$	\$	\$	\$	\$	\$	\$	\$	\$
General and administrative	\$	\$	\$	\$	\$	\$	\$	\$	\$
Total operating expenses	\$	\$	\$	\$	\$	\$	\$	\$	\$
Operating income	\$	\$	\$	\$	\$	\$	\$	\$	\$
Other expenses	\$	\$	\$	\$	\$	\$	\$	\$	\$
Income before taxes	\$	\$	\$	\$	\$	\$	\$	\$	\$
Cumulative FDI before taxes	\$	\$	\$	\$	\$	\$	\$	\$	\$
Income Tax	\$	\$	\$	\$	\$	\$	\$	\$	\$
Net Income	\$	\$	\$	\$	\$	\$	\$	\$	\$

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General and Administrative

	Q1 1999	Q2 1999	Q3 1999	Q4 1999	Q1 2000	Q2 2000	Q3 2000	Q4 2000	Q1 2001	Q2 2001	Q3 2001	Q4 2001
General and Administrative Expenses												
Salary	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Office	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Misc	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Lease Fees	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
TOTAL:	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$

Statement of Cash Flows

	Three months ending June 1999	Three months ending Sept 1999	Three months ending Dec 1999	Three months ending March 2000	Three months ending June 2000	Three months ending Sept 2000	Three months ending Dec 2000	Three months ending March 2001	Three months ending June 2001
Cash Revenue									
Net Income (loss)	\$ (537,533.33)	\$ (527,033.33)	\$ (527,033.33)	\$ (633,760.00)	\$ (182,872.50)	\$ 105,640.00	\$ 501,640.00	\$ 1,492,728.44	\$ 1,917,271.24
Cash Disbursements									
Depreciation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Equipment	\$ (361,550.00)	\$ -	\$ -	\$ (282,300.00)	\$ -	\$ -	\$ -	\$ (139,550.00)	\$ -
Reconciliation of Cash Flows									
Beginning Cash	\$ -	\$ (899,083.33)	\$ (1,426,116.67)	\$ (1,953,150.00)	\$ (2,869,210.00)	\$ (3,052,082.50)	\$ (2,946,442.50)	\$ (2,444,802.50)	\$ (1,091,624.07)
Cash Revenues	\$ (537,533.33)	\$ (527,033.33)	\$ (527,033.33)	\$ (633,760.00)	\$ (182,872.50)	\$ 105,640.00	\$ 501,640.00	\$ 1,492,728.44	\$ 1,917,271.24
Cash Disbursements	\$ (361,550.00)	\$ -	\$ -	\$ (282,300.00)	\$ -	\$ -	\$ -	\$ (139,550.00)	\$ -
Ending Cash	\$ (899,083.33)	\$ (1,426,116.67)	\$ (1,953,150.00)	\$ (2,869,210.00)	\$ (3,052,082.50)	\$ (2,946,442.50)	\$ (2,444,802.50)	\$ (1,091,624.07)	\$ 825,647.17

Provision for Income Taxes

	1999	2000	2001
Profit (loss) before taxes	\$ (1,591,600.00)	\$ (209,352.50)	\$ 19,864,009.50
Depreciation	\$ -	\$ -	\$ -
Gross taxable income	\$ (1,591,600.00)	\$ (209,352.50)	\$ 19,864,009.50
Tax loss carry forward	\$ -	\$ 209,352.50	\$ (1,800,952.50)
Net taxable income	\$ -	\$ -	\$ 18,063,057.00
Tax 1st \$25K at 20%	\$ -	\$ -	\$ 5,000.00
Tax 2nd \$25K at 22%	\$ -	\$ -	\$ 5,500.00
Tax above \$50K at 48%	\$ -	\$ -	\$ 8,646,267.36
Total tax due	\$ -	\$ -	\$ 8,656,767.36
Net profit (loss)	\$ (1,591,600.00)	\$ (209,352.50)	\$ 11,207,242.14
Cumulative profit (loss)	\$ (1,591,600.00)	\$ (1,800,952.50)	\$ 9,406,289.64

Expense Summary

	1999	2000	2001
Development Salary	\$ 562,500.00	\$ 942,500.00	\$ 1,008,475.00
Other Salary	\$ 446,250.00	\$ 636,650.00	\$ 681,215.50
Advertising	\$ 200,000.00	\$ 500,000.00	\$ 1,000,000.00
PR	\$ 27,500.00	\$ 35,000.00	\$ 42,500.00
Office Space	\$ 55,800.00	\$ 75,300.00	\$ 100,650.00
Equipment	\$ 361,550.00	\$ 282,300.00	\$ 139,550.00
ISP	\$ 24,050.00	\$ 108,150.00	\$ 108,150.00
Legal Fees	\$ 10,500.00	\$ 5,000.00	\$ 5,000.00
Prizes	\$ -	\$ 30,000.00	\$ 60,000.00
Content	\$ -	\$ 267,840.00	\$ 2,160,000.00
Misc.	\$ 265,000.00	\$ 150,000.00	\$ 170,000.00
TOTAL	\$ 1,953,150.00	\$ 3,032,740.00	\$ 5,475,540.50

Equipment and Materials

Product	Fiscal Year 1999		Fiscal Year 2000		Fiscal Year 2001	
	QTY	Cost Per	QTY	Cost Per	QTY	Cost Per
HARDWARE						
WEB Server	1	\$ 5,000.00	1	\$ 5,000.00	0	\$ 5,000.00
Application Server	1	\$ 50,000.00	4	\$ 50,000.00	2	\$ 50,000.00
File Server	1	\$ 5,000.00	1	\$ 5,000.00	0	\$ 5,000.00
Developer Workstations	10	\$ 3,000.00	2	\$ 3,000.00	3	\$ 3,000.00
Other PCs	5	\$ 2,500.00	4	\$ 2,500.00	6	\$ 2,500.00
DB Server (Sun 4500)	1	\$ 100,000.00	0	\$ 100,000.00	0	\$ 100,000.00
Misc Network	2	\$ 5,000.00	3	\$ 5,000.00	1	\$ 5,000.00
Printers	2	\$ 800.00	1	\$ 800.00	1	\$ 800.00
Cisco 4000 Series Router	1	\$ 5,000.00	5	\$ 5,000.00	0	\$ 5,000.00
Fast Ethernet Hub	1	\$ 10,000.00	1	\$ 10,000.00	0	\$ 10,000.00
SOFTWARE						
Windows NT	8	\$ -	0	\$ -	2	\$ -
Windows98	15	\$ -	6	\$ -	9	\$ -
MS Office	15	\$ -	6	\$ -	9	\$ -
MS Developer Network	10	\$ 250.00	2	\$ 250.00	3	\$ 250.00
MS FrontPage	2	\$ 100.00	0	\$ 100.00	0	\$ 100.00
Oracle 8i	50	\$ 1,475.00	0	\$ 1,475.00	0	\$ 1,475.00
Misc. Dev Software	40	\$ 1,000.00	5	\$ 1,000.00	0	\$ 1,000.00
OFFICE EQUIPMENT						
Furniture, Stationary, Misc.		\$ 16,000.00		\$ 6,000.00		\$ 9,000.00
TOTAL:		\$ 361,550.00		\$ 282,300.00		\$ 139,550.00

ISP

	Fiscal Year 1999		Fiscal Year 2000		Fiscal Year 2001	
	QTY	Cost Per	QTY	Cost Per	QTY	Cost Per
Fractional T1 (10 mbit)	1	\$ 25,000.00	5	\$ 21,600.00	5	\$ 21,600.00
Initial Wiring	1	\$ 5,000.00	0	\$ 5,000.00	0	\$ 5,000.00
Domain Names	3	\$ 100.00	3	\$ 50.00	3	\$ 50.00
TOTAL:		\$ 24,050.00		\$ 108,150.00		\$ 108,150.00

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9.3 Supporting Statistics and Sources

In 1998, there was \$1.9 billion spent on online advertising, as opposed to \$1.6 billion spent on traditional outdoor advertising. - *Internet World*, May 10, 1999, citing the Internet Advertising Bureau

The internet currently has 147 million users, 52% of which are in the US. - *The Industry Standard*, March 22, 1999, citing *The Computer Industry Almanac*

Pointcast has 1.4 million users (Oct. 1997) - Audit Bureau of Verification Services, Inc.

GENDER The March 1997 CommerceNet/Nielsen survey of Internet Demographics found that women now represent over 42% of the online population. Source: Nielsen/CommerceNet

AGE The average age of Web users is 34.9 years old, according to the 6th GVI WWW User Survey. This average age has been steadily increasing over the last several GVI surveys. (Fourth Survey: 32.7 years, Fifth Survey: 33.0 years, Sixth Survey: 34.9 years) Source: Georgia Institute of Technology, Graphics, Visualization & Usability Center (GVU), 1997

INCOME A 1996 survey by the Media Futures Program of SRI Consulting revealed that more than 65% of Internet users have household incomes of \$50,000 or more, compared with 35% of the U.S. population as a whole (index 186). According to the sixth GVI study, average household income of Internet users is \$60,800 (US). The distribution of income levels is very similar to the Fifth GVI survey: Less than \$29K: 18.8%, \$30-50K: 23.0%, over \$50K: 41.1%. Sources: SRI International; GVI, 1997.

EDUCATION According to the same SRI study, more than 75% of Internet users have attended college, as opposed to 46% of the total U.S. population (index 163). Source: SRI International

Push technology will result in \$4.6 billion in revenue by the year 2000. - *WSJ*

Average advertisement rate per month at PointCast can be up to \$62,000. - *Advertising Age*

IntelliQuest found that 32% of PointCast viewers have purchased something on the Web in the last 30 days. - *Advertising Age*

It also showed PointCast's demographic as an upper management crowd. The average household income was \$109,000, with 90% of users having some college education or greater. The group also favors interactive media; 46% said they are reading newspapers less, since signing up for PointCast. - *Advertising Age*.

Peter Storck, group director of online advertising at Jupiter, said that push will account for only about 5% of the \$940 million projected this year for online advertisement spending.

That number is expected to reach 25% of total advertisement spending by 2001, Mr. Storck said.

MORE INTRUSIVE ADVERTISING

"There are not that many opportunities for an advertiser to buy push," he said. "You can buy PointCast and you can send direct e-mail, but that at the moment is about it."

"Advertisers like the early signs of push," he added. "It's more intrusive and it's more like TV."
- *Advertising Age*

That brings total Internet advertisement spending for the first half of 1997 to \$343.9 million, up 322% over online spending in the first half of 1996. - *Advertising Age*

Jupiter estimated online advertising revenue would reach \$940 million this year, jumping to \$7.7 billion in 2002. - *Advertising Age*

In just a few years, the Internet has become a worldwide phenomenon, with over 60 million users, approximately 20 million hosts, and over 1.6 million domain names. (Network Wizards, July 1997)

The average number of hours that a user has the Pointcast screen saver active is 7.6 hours. - ABC Interactive (a third party auditing organization)

Today, the CPM on the Web currently hovers between \$40 to \$70. Similar to the cable industry, the top 50 web sites (out of over 500,000 commercial sites) receive 85% of total advertisement revenues and have an average CPM of over \$50. (Computer Advertisers' Media Advisor).

Popularity – On June 2, 1999, Flash had over 145,400,592 downloads and Shockwave had 73,439,111 downloads. –Macromedia

"The use of Shockwave [Flash] for 'Big Shot' and the approach we took proved very effective. In the development stages alone, Shockwave [Flash] opened up a number of creative opportunities for us, such as including an original score. I couldn't imagine this site without it." – Andrew Schneider, Director, Interactive Marketing, Columbia TriStar

"The capabilities to present animation on the internet have improved significantly over the last few years. Prior to Shockwave [Flash], there was really only animated gifs which display a series of still frames (limited by file sizes) without sound or interactivity - making them repetitive and limited in action. Now with Shockwave [Flash], animators have the capability to make their internet animations as intricate and fluid as they wish, with sound, interactivity and most importantly - flexibility in design and extensive control over the timing. Not only are the qualities richer but the file size has reduced significantly with Shockwave's [Flash] design and compression capabilities. This has been key to the success of our website animations." – Jamie Edis, CEO, Ezone Corporation

"Push Media is the future of interactive television." – Andrew Anker, CEO of HotWired – from WSJ

Forty million households in the United States own stocks or mutual funds, according to Forrester Research, out of which 1.5 million had online, electronic trading accounts by the end of 1996. That figure is expected to grow to 3 million by the end of 1997, and to reach 10 million by the turn of the century. – Forrester Research

The chart in Figure 5.2 came from Morgan Stanley Research.

* The launch of HBO in 1976 was used to estimate the beginning of cable as an entertainment/advertising medium. Though cable technology was developed in the late 1940's, its initial use was primarily for the improvement of reception in remote areas.

** Morgan Stanley Technology Research Estimate

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StringEmpty  Set To Nullnull  Set To Zero00  Set To Empty
Template Name
Template Code
Template TypeTemplate CSX Id"PARIENT UPDATE RESTRICT" /* ERwin Builtin %Datetime */
/* %Parent %VerbPhrase %Child ON PARENT UPDATE RESTRICT */
if
/* %%JoinPKPK(:%%Old,:%%New," <> "," or ") */
%JoinPKPK(:%Old,:%New," <> "," or ")
then
select count(*) into numrows
from %Child
where
/* %%JoinFKPK(%Child,:%%Old," = "," and") */
%JoinFKPK(%Child,:%Old," = "," and");
if (numrows > 0)
then
raise_application_error(
-20005,
'Cannot UPDATE "%Parent" because "%Child" exists.'
);
end if;
end if;
' PARENT UPDATE CASCADE /* ERwin Builtin %Datetime */
/* %Parent %VerbPhrase %Child ON PARENT UPDATE CASCADE */
if
/* %%JoinPKPK(:%%Old,:%%New," <> "," or ") */
%JoinPKPK(:%Old,:%New," <> "," or ")
then
update %Child
set
/* %%JoinFKPK(%Child,:%%New," = ","") */
%JoinFKPK(%Child,:%New," = ","")
where
/* %%JoinFKPK(%Child,:%%Old," = "," and") */
%JoinFKPK(%Child,:%Old," = "," and");
end if;
' PARENT UPDATE SET NULL /* %Parent %VerbPhrase %Child ON PARENT
UPDATE SET NULL */
if
/* %%JoinPKPK(:%%Old,:%%New," <> "," or " */
%JoinPKPK(:%Old,:%New," <> "," or ")
then
update %Child
set
/* %%SetFK(%Child,NULL) */
%SetFK(%Child,NULL)
where
/* %%JoinFKPK(%Child,:%%Old," = ","") */
%JoinFKPK(%Child,:%Old," = ","");
end if;
' PARENT DELETE RESTRICT /* ERwin Builtin %Datetime */
/* %Parent %VerbPhrase %Child ON PARENT DELETE RESTRICT */
select count(*) into numrows
from %Child
where

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/* %%JoinFKPK(%Child,:%%Old," = "," and") */
%JoinFKPK(%Child,:%Old," = "," and");
if (numrows > 0)
then
raise_application_error(
-20001,
'Cannot DELETE "%Parent" because "%Child" exists.'
);
end if;
□' □□□□□PARENT DELETE CASCADE□ /* ERwin Builtin %Datetime */
/* %Parent %VerbPhrase %Child ON PARENT DELETE CASCADE */
delete from %Child
where
/* %%JoinFKPK(%Child,:%%Old," = "," and") */
%JoinFKPK(%Child,:%Old," = "," and");
□' □□□□□PARENT DELETE SET NULL4□ /* ERwin Builtin %Datetime */
/* %Parent %VerbPhrase %Child ON PARENT DELETE SET NULL */
update %Child
set
/* %%SetFK(%Child,NULL) */
%SetFK(%Child,NULL)
where
/* %%JoinFKPK(%Child,:%%Old," = "," and") */
%JoinFKPK(%Child,:%Old," = "," and");
□' □□□□□CHILD INSERT RESTRICT&□ /* ERwin Builtin %Datetime */
/* %Parent %VerbPhrase %Child ON CHILD INSERT RESTRICT */
select count(*) into numrows
from %Parent
where
/* %%JoinFKPK(:%%New,%Parent," = "," and") */
%JoinFKPK(:%New,%Parent," = "," and");
if (
/* %%NotNullFK(:%%New," is not null and") */
%NotNullFK(:%New," is not null and")
numrows = 0
)
then
raise_application_error(
-20002,
'Cannot INSERT "%Child" because "%Parent" does not exist.'
);
end if;
□' □□□□□CHILD INSERT CASCADE□□ /* ERwin Builtin %Datetime */
/* %Parent %VerbPhrase %Child ON CHILD INSERT CASCADE */
insert into %Parent (%ParentPK(","))
select %ChildFK(",")
from %Child
where
/* %%NotNullFK(:%%New," is not null and") */
%NotNullFK(:%New," is not null and")
not exists (
select * from %Parent
where
/* %%JoinFKPK(:%%New,%Parent," = "," and") */
%JoinFKPK(:%New,%Parent," = "," and")
);

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□'    □□□□□CHILD INSERT SETNULLp□ /* ERwin Builtin %Datetime */
/* %Parent %VerbPhrase %Child ON CHILD INSERT SET NULL */
update %Child
set
/* %%SetFK(%Child,NULL) */
%SetFK(%Child,NULL)
where
not exists (
select * from %Parent
where
/* %%JoinFKPK(:%%New,%Parent," = "," and") */
%JoinFKPK(:%New,%Parent," = "," and")
) and
/* %%JoinPKPK(%Child,:%%New," = "," and") */
%JoinPKPK(%Child,:%New," = "," and");
□'    □□□□□CHILD UPDATE RESTRICT□□ /* ERwin Builtin %Datetime */
/* %Parent %VerbPhrase %Child ON CHILD UPDATE RESTRICT */
select count(*) into numrows
from %Parent
where
/* %%JoinFKPK(:%%New,%Parent," = "," and") */
%JoinFKPK(:%New,%Parent," = "," and");
if (
/* %%NotNullFK(:%%New," is not null and") */
%NotNullFK(:%New," is not null and")
numrows = 0
)
then
raise_application_error(
-20007,
'Cannot UPDATE "%Child" because "%Parent" does not exist.'
);
end if;
□'    □□□□□CHILD UPDATE CASCADE□□ /* ERwin Builtin %Datetime */
/* %Parent %VerbPhrase %Child ON CHILD UPDATE CASCADE */
insert into %Parent (%ParentPK(",","))
select %ChildFK(",","))
from %Child
where
/* %%NotNullFK(:%%New," is not null and") */
%NotNullFK(:%New," is not null and")
not exists (
select * from %Parent
where
/* %%JoinFKPK(:%%New,%Parent," = "," and") */
%JoinFKPK(:%New,%Parent," = "," and")
);
□'    □□□□□CHILD UPDATE SETNULLp□ /* ERwin Builtin %Datetime */
/* %Parent %VerbPhrase %Child ON CHILD UPDATE SET NULL */
update %Child
set
/* %%SetFK(%Child,NULL) */
%SetFK(%Child,NULL)
where
not exists (
select * from %Parent

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where
/* %%JoinFKPK(:%%New,%Parent," = "," and") */
%JoinFKPK(:%New,%Parent," = "," and")
) and
/* %%JoinPKPK(%Child,:%%New," = "," and") */
%JoinPKPK(%Child,:%New," = "," and");
'      CHILD DELETE RESTRICT@      /* ERwin Builtin %Datetime */
/* %Parent %VerbPhrase %Child ON CHILD DELETE RESTRICT */
select count(*) into numrows from %Parent
where
/* %%JoinFKPK(:%%Old,%Parent," = "," and") */
%JoinFKPK(:%Old,%Parent," = "," and");
if (numrows > 0)
then
raise_application_error(
-20010,
'Cannot DELETE "%Child" because "%Parent" exists.'
);
end if;
'      CHILD DELETE CASCADE@      /* ERwin Builtin %Datetime */
/* %Parent %VerbPhrase %Child ON CHILD DELETE CASCADE */
delete from %Parent
where
/* %%JoinFKPK(:%%Old,%Parent," = "," and") */
%JoinFKPK(:%Old,%Parent," = "," and");
!      PARENT INSERT RESTRICT@      /* ERwin Builtin %Datetime */
/* %Parent %VerbPhrase %Child ON PARENT INSERT RESTRICT */
select count(*) into numrows from %Child
where
/* %%JoinFKPK(%Child,:%%New," = "," and") */
%JoinFKPK(%Child,:%New," = "," and");
if (numrows = 0)
then
raise_application_error(
-20011,
'Cannot INSERT "%Parent" because "%Child" does not.'
);
end if;
$'      CHILD
UPDATE HEADER@create trigger t%1Action_%27TableName after %Action on %TableName for each
row
-- ERwin Builtin %Datetime
-- %Action trigger on %TableName
declare numrows INTEGER;
begin('      CHILD
UPDATE FOOTER%-- ERwin Builtin %Datetime
end;
/
)'      CHILD
DELETE HEADER@create trigger t%1Action_%27TableName after %Action on %TableName for each
row
-- ERwin Builtin %Datetime
-- %Action trigger on %TableName
declare numrows INTEGER;
begin**      CHILD
DELETE FOOTER%-- ERwin Builtin %Datetime

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end;
/
+      000000
INSERT HEADER@create trigger t%1Action_%27TableName after %Action on %TableName for each
row
-- ERwin Builtin %Datetime
-- %Action trigger on %TableName
declare numrows INTEGER;
begin,' 000000
INSERT FOOTER%-- ERwin Builtin %Datetime
end;
/
-      00000000CUSTOM TRIGGER HEADER`create trigger %TriggerName
%Fire %Actions(" or ")
on %TableName
%RefClause
%Scope
.      00000000CUSTOM TRIGGER FOOTER      00000000CUSTOM TRIGGER FOOTER
00000000CUSTOM TRIGGER DEFAULT BODY!@create trigger %TriggerName
%Fire %Actions(" or ")
on %TableName
%RefClause
%Scope
/* ERwin Builtin %Datetime */
/* default body for %TriggerName */
declare numrows INTEGER;
begin
%ForEachChildRel() {
%RelTemplate
}
%ForEachParentRel() {
%RelTemplate
}
end;
/
0      00000000PARENT UPDATE SET DEFAULT/* ERwin Builtin %Datetime */
/* %Parent %VerbPhrase %Child ON PARENT UPDATE SET DEFAULT */
/* Application specific. Left out intentionally. */@      00000000PARENT DELETE SET DEFAULT/*
ERwin Builtin %Datetime */
/* %Parent %VerbPhrase %Child ON PARENT DELETE SET DEFAULT */
/* Application specific. Left out intentionally. */@      00000000PARENT INSERT SET DEFAULT/*
ERwin Builtin %Datetime */
/* %Parent %VerbPhrase %Child ON PARENT INSERT SET DEFAULT */
/* Application specific. Left out intentionally. */"      00000000CHILD INSERT SET DEFAULT/* ERwin
Builtin %Datetime */
/* %Parent %VerbPhrase %Child ON CHILD INSERT SET DEFAULT */
/* Application specific. Left out intentionally. */@      00000000CHILD UPDATE SET DEFAULT/*
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/* %Parent %VerbPhrase %Child ON CHILD UPDATE SET DEFAULT */
/* Application specific. Left out intentionally. */@      00000000CHILD DELETE SET DEFAULT/*
ERwin Builtin %Datetime */
/* %Parent %VerbPhrase %Child ON CHILD DELETE SET DEFAULT */
/* Application specific. Left out intentionally. *//#      00000000CHILD DELETE SET NULLŽ/* ERwin
Builtin %Datetime */
/* %Parent %VerbPhrase %Child ON CHILD DELETE SET NULL */
/* Application specific. Left out intentionally. */"      00000000PARENT INSERT SET NULL@/* ERwin Builtin

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/* %Parent %VerbPhrase %Child ON PARENT INSERT SET NULL */

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/* Application specific. Left out intentionally. */          PARENT INSERT CASCADEŽ/*
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ERwin Builtin %Datetime */

/* %Parent %VerbPhrase %Child ON PARENT INSERT CASCADE */

/* Application specific. Left out intentionally. */ % 000000

Template Name"□□Template Handle□□

Purpose Text"□Purpose□□Template Handle""□□CHILD DELETE CASCADE!"'yy□□CHILD DELETE
RESTRICT ' 'yy□□CHILD DELETE SET DEFAULT##'yy□□CHILD DELETE SET NULL""yy□□CHILD
INSERT CASCADE□'yy□□CHILD INSERT RESTRICT□'yy□□CHILD INSERT SET
DEFAULT□'yy□□CHILD INSERT SET NULL□'yy□□CHILD UPDATE CASCADE□'yy□□CHILD
UPDATE RESTRICT□'yy□□CHILD UPDATE SET DEFAULT□'yy□□CHILD UPDATE SET
NULL□'yy□□CUSTOM TRIGGER DEFAULT BODY0'yy□□CUSTOM TRIGGER
FOOTER/yy□□CUSTOM TRIGGER HEADER.'yy□□PARENT DELETE CASCADE□'yy□□PARENT
DELETE RESTRICT□'yy□□PARENT DELETE SET DEFAULT□'yy□□PARENT DELETE SET
NULL□'yy□□PARENT INSERT CASCADE%%'yy□□PARENT INSERT RESTRICT\$'\$yy□□PARENT
INSERT SET DEFAULT""yy□□PARENT INSERT SET NULL&&'yy□□PARENT UPDATE
CASCADE□'yy□□PARENT UPDATE RESTRICT□'yy□□PARENT UPDATE SET
DEFAULT□'yy□□PARENT UPDATE SET NULL□'yy□□RAISE EXCEPTION
PROC1'yy□□TRIGGER DELETE FOOTER++'yy□□TRIGGER DELETE HEADER""yy□□TRIGGER
INSERT FOOTER-'yy□□TRIGGER INSERT HEADER,'yy□□TRIGGER UPDATE
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content_name description
episode_id name
description/2
producer_id/2
name/2 address1

address2
citystatezipphonephone_2fax
description/3ad_idname/3
description/4ad_agency_id/2
company_idname/4
address1/2address2city
state!zip"phone#phone_2\$fax%description&url'url(contact_person_id)
first_name*middle_name+ last_name,phone-phone_2.fax/
cell_phone0pager1address12address23city4state5email6name7address18
address29city:state;zip<phone=phone_2>fax?url@descriptionA
user_idB
first_nameC middle_nameD last_nameJzipL

address_idM
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Denis Khoo

100 N. Whisman Rd. #198
Mountain View, CA 94043
(650)533-3791

Email: denik@bigfoot.com

Education

UNIVERSITY OF CALIFORNIA, BERKELEY
Bachelor of Arts, Computer Science
Haas School of Business, Business Administration Minor

Experience

Aug 1998 – Feb 1999

TRUE GENESIS (FORTUNE 50 CLIENT)

Fremont, CA

eCommerce Architect

- Consulted the True Genesis development team in building a pilot eCommerce application for their fortune 50 client.
- Over a six month period, Mr. Khoo aided in designing, architecting, and developing the eCommerce application using Netscape Application Server (KIVA), Netscape Extensions Toolkit, and an Informix database. UML was used as the standard for all Object Oriented Design and Analysis.
- Mr. Khoo designed the presentation layer and formalized a page/event model using AppLogics.
- Mr. Khoo designed and developed business objects using Netscape Extension Builder. Objects were made “poolable”, and optimized for mass scale usage. All development was done in JAVA.
- Mr. Khoo configured the development environment on NT Workstations and setup the production web server, application server, and database server on a SUN Solaris box.
- Mr. Khoo measured scalability and performance of the application by performing stress testing with RSW Software’s eLoad.

May 1998 – Aug 1998

NETDYNAMICS

Menlo Park, CA

NetDynamics Server QA Team Lead

- Mr. Khoo lead a team of three members to regression test NetDynamics 4.1 database connectivity against Oracle 7.34/8.05, Informix 7.23, Sybase 10/11, DB2, and MS SQL 6.5. Verified native connectivity, and ODBC (Intersolv) connectivity where applicable. Created projects to load test SQL, as well as stored procedures.
- Performed multi-machine testing, load balancing, and performance testing on various platforms: NT, Sun Solaris, and HP-UX.
- Departed NetDynamics after an unexpected acquisition by SUN Microsystems.

Oct 1997 – May 1998

HEALTH ALLIANCE PLAN, HMO (ANDERSEN CONSULTING)

Detroit, MI

Architecture Designer/Development Lead

- Over a eight-month period, Mr. Khoo and a team of seven others were able to complete HAP’s online referral extranet – thousands of physicians who are contracted by HAP can now instantly create referrals for HAP insurance members. This reduced lead time from two weeks to two hours.
- Mr. Khoo constructed the data model (in Oracle) and the core architectural objects (using JAVA) in tandem for the referral application. The goal of the architectural objects were to encapsulate as much of the core business logic as possible, thus abstracting the development team from having to understand the specific business processes.
- A majority of the application was created using NetDynamics 3.11. Mr. Khoo designed several of the application pages using an event-driven design methodology that he devised. Mr. Khoo acted as a consultant for the core development team, and also developed some of the more complicated pages himself. The application contained an extensive number of backend SQL calls to the Oracle DB and the client’s legacy system.
- Mr. Khoo also designed and developed several other required components of the project. Once such component was a back-end FAX service which was done using C, embedded SQL, and PL/SQL. Another component was a batch process which replicated the referral application’s Oracle data back to the client’s legacy system.

June 1996 – Oct 1996

SAP SAPPHIRE CONFERENCE (ANDERSEN CONSULTING)

Palo Alto, CA

Developer

- Mr. Khoo developed an enterprise Intranet prototype displayed at SAP’s “Sapphire Conference.” The prototype demonstrated the many advantages of having a web front-end to SAP; the prototype provided a highly graphical interface for the many stages of a typical product based company’s cash flows – from order entry to the shipping status.

- For this project, Mr. Khoo used OpenScape, a development tool which provided the middle layer access to SAP and a Visual Basic programming language to develop the front end.
- In a team of five, Mr. Khoo was responsible for all of the VB front-end development. Mr. Khoo also developed client-side JAVA (applets) for the application. He was guided by a consultant who primarily handled the application's architecture.

June 1995 – Sept 1995

BRODERBUND SOFTWARE (BANNER BLUE DIVISION)

Fremont, CA

Quality Assurance

- Mr. Khoo performed QA for top selling genealogy software, Family Tree Maker for Windows.
- Mr. Khoo tested all functionality of the application and reported bugs directly to the programmers.

June 1994 – Sept 1994

SOFTWARE VENTURES CORPORATION

Berkeley, CA

Technical Support/Beta Testing Administrator

- Mr. Khoo spent half of his workday answering technical questions pertaining to the communications software product, MicroPhone (for Mac and Windows).
- Mr. Khoo spent the other half of his workday leading the MicroPhone for Windows 2.0 beta program. He actively recruited major clients such as KPMG Peat Marwick, Supra Corp., and the University of Pennsylvania to beta test the software package. He also communicated with approximately fifty individual beta testers worldwide.

June 1993 – Sept 1993

SYMPHONY COMPUTERS

Santa Clara, CA

Computer Technician/Sales

- As the head of computer repairs and customer relations, Mr. Khoo diagnosed and serviced all technical calls and customer drop-ins.
- Mr. Khoo was also sent on-site, to the customer's location, whenever there was a mission critical problem.

Activities

Sept 1997 – Oct 1997

COMDEX PRESENTATION – “NEXT GENERATION INTERNETS”

- Researched and prepared Internet presentation given at Comdex Fall '97 EXPOCOMM seminar.
- Addressed current internet infrastructure and future requirements: IPv6, gigaPOPs, ATM, Route Arbiter, and VPNs.

Oct 1996 – March 1997

CREATOR & WEBMASTER

- Mr. Khoo independently designed and managed an informative WEB site using HTML and CGI scripting (PERL).
- In April 1997, Mr. Khoo sold the domain name after receiving an offer he couldn't refuse.

Sept 1996 – Dec 1996

HAAS CONSULTING GROUP (HCG)

- Mr. Khoo, along with a team of four others, prepared a transitional strategy for the Nature Company; the Nature Company had just been acquired by the Discovery Channel, and it was yet undetermined how the Discovery Channel could best leverage the Nature Company.
- A case study on Disney was performed and was used as the model for the Discovery Channel to aim towards.
- Complete financial analysis was performed for three potential scenarios.
- Coordinated effort with the top executives of the Nature Company.

Spring 1993 – Fall 1995

ALPHA KAPPA LAMBDA FRATERNITY

Treasurer

- Mr. Khoo was responsible for managing the fraternity's budget. Management duties include handling the cook's payroll and taxes, house mortgage, property taxes, and collection of rent. He also aided the fraternity in the sales and leasing of a new house.

Programming Skills

➤ C/C++	➤ JAVA	➤ HTML
➤ JavaScript	➤ VBScript	➤ Visual Basic
➤ SQL	➤ PERL	

Development Tools

➤ NetDynamics 3.1/4.1	➤ Netscape App Server (KIVA)	➤ MS Visual InterDev
➤ OpenScape	➤ MS FrontPage	➤ MS Visual Studio (C++, VB)

Technologies

➤ n-Tier WEB Architecture	➤ Object Oriented Design/Modeling	➤ ASP (Active Server Pages)
➤ javadocs	➤ Java Applets	➤ UML

Resume of Trey F. Ratcliff
 Email: trey@theratcliffs.com
 Address: 2717 Royal Troon, Plano, TX 75002
 (972) 359-9547

Skills	
	Software - Java, Netscape Application Server, NetDynamics, Vision Jade, C, Powerbuilder, HTML, C++, SQL
	OS - Windows NT 4.0, Windows 95/98, HP-UX
	Other - OOAD, UML, Rational Unified Process, Client/Server, Team Lead

Work Experience	
03/1999 to Present	Tactica Technology Group - Project at Texas Utilities (TXU) in Dallas, TX
	Framework Architect / Application Team Lead
	<p>The purpose of the internet strategy implementation at TXU was to both create an internet framework and establish the methodologies that surround the internet application creation process.</p> <p>Mr. Ratcliff served in several capacities at TXU. First, he customized an existing James Martin & Company methodology which was outdated and not applicable to internet development. The new methodology was more similar to the Rational Unified Process, but customized for the development tools that were being used at TXU. Second, Mr. Ratcliff also participated in the selection of an application server to be used as the backbone for all future TXU internet development. Lastly, Mr. Ratcliff also led a development effort to build a web front end to an legacy procurement system that existed in CICS.</p>
09/1998 to 03/1999	Tactica Technology Group - Project at Level 3 Communications in Boulder, CO
	Application Team Lead
	<p>The purpose of the application at Level 3 was to create a web-based customer service system that allowed people to create and maintain their phone and internet service.</p> <p>Mr. Ratcliff led in the design and development of an application based on the Netscape Application Server (formerly KIVA) which used 100% pure Java business logic on the server side. After seeing the first phase of the project all the way through implementation, Mr. Ratcliff used UML to perform the analysis and design of a web-based trouble ticket system.</p> <p>A press release that describes the accomplishments of the project can be found at http://www.level3.com/CompanyNews/may1099_custserv.html</p>
06/1998 to 09/1998	Tactica Technology Group - Project at i2 Technologies in Dallas, TX
	Framework Architect
	<p>The goal of the project at i2 was to create a custom Java-based architecture for multiple applications to utilize.</p> <p>The custom Java application server was used to develop a series of Java applications which relied on a rich GUI architecture connecting to databases via CORBA and customized server-side engines. Mr. Ratcliff also assisted with the creation of a consistent and repeatable testing methodology that would be used throughout i2 for the testing of all software.</p>

06/1997 to 06/1998	Andersen Consulting - Project at Health Alliance Plan in Detroit, MI
	Development Team Manager / Application Designer
	<p>The goal of the application at Health Alliance Plan was to create an internet based referral system.</p> <p>Mr. Ratcliff led the design and development team in the implementation of a cutting-edge internet application. The technical architecture was comprised of an internet browser connecting through the HAP firewall to a Netscape Enterprise server, making Java-based requests on a NetDynamics application server, then retrieving its data from an Oracle database.</p>
05/1995 to 06/1997	Andersen Consulting - Project at CNN in Atlanta, GA
	Client Team Lead / Application Designer / Lead Developer
	<p>The goal of the application at CNN was to create an automated commercial selling and scheduling system.</p> <p>Mr. Ratcliff's experience at CNN focussed on three main roles. First, his main role on the Technical Architecture team was that of Client Architecture Lead. Mr. Ratcliff designed the client architecture based on the fundamentals of object oriented design. The design he implemented was used by over 50 client developers who built an application with 500+ windows. An application of this magnitude required an extremely flexible and reusable architecture. Mr. Ratcliff orchestrated an optimal object-oriented approach to incorporate a strategic mix of inheritance and encapsulation. For example, a rich inheritance structure would have made the windows extremely powerful, but they could also carry an unnecessary amount of bulk. In cases when on-demand functionality was needed, Mr. Ratcliff designed non-visual objects which could be instantiated at run-time. This service-based architecture maximized the theories of business functionality reuse, while still keeping the client side lean and unburdened. His extensive experience with o-o design enabled him to lead all of the design reviews for each of the applications.</p> <p>Mr. Ratcliff's secondary role was that of resident Webmaster for the project intranet. In its initial state, the intranet was no more than a collection of technical reference documents created in raw HTML. Later, after more tools became available to help massive document maintenance, Mr. Ratcliff began to use Netscape Gold until the entire intranet was finally converted to Microsoft FrontPage format. Maintenance of the intranet became quite a task with over twenty developers making changes to an ever-changing web structure. As time went on the intranet contained several items, including high-level design documents, window specifications, database change request forms, GUI standards, C coding standards, etc. Mr. Ratcliff implemented a definitive set of standards and practices to keep the intranet organized and maintainable.</p> <p>The third role in which Mr. Ratcliff served is that of application team lead. One of the many applications was called "Ratecard." Essentially, the purpose of the Ratecard application was to show detailed information for any given program which would run on CNN, TNT, TBS, etc. This information could contain demographic information, the days and times when it runs, the price of an advertisement during that program, and so on. Mr. Ratcliff, who led a team of four developers, used his object-oriented skills to design the application and see it through to completion. Mr. Ratcliff was also seen on the project as the usability expert. He would perform GUI reviews for all of the windows and led several usability meetings.</p>

05/1993 to 05/1995	The Computer Tutor - Dallas, TX
	Independent Contractor
	While attending SMU, Mr. Ratcliff started own consulting company. Specialized in custom C coding for various businesses in the Dallas area. Different clients had distinct requirements, including wiring and administering LANs, purchasing and setting up 5 GPS enabled laptops for executives, training a group of secretaries on the how to use Word, designing custom web pages, etc.
01/1991 to 05/1993	Johnson Yokogawa - Dallas, TX
	Testing Engineer
	As part of the Southern Methodist University computer engineering internship, 2.5 years were spent on various operations surrounding a control system for a nuclear power plant. Much of the time was spent developing testing scripts and performing other QA.

Education		
05/1995	B. S. in Computer Science Minors in Math and Public Relations	Southern Methodist University Dallas, TX

Other Activities		
Internet Gaming League	<p>Mr. Ratcliff enjoys spending his spare time as commissioner of an internet-based league. His league includes over 1000 people from all over the world. The league is based on the popular game, Quake. The exact name for the league is the QWHPCL (QuakeWorld High-Ping Capture League). All league matches are played on dedicated servers, all over the world, which requires all league members to have TCP/IP connections to the internet. The "High-Ping" portion means that the league is only open to those that dial up via a modem, since their packets usually have to bounce through about six different IPs before they reach the server. This slow connection usually results in a 200-300 millisecond ping (as opposed to people who connect over a T-1 who have a 20-40 ms ping).</p> <p>The league itself is run by a team of people whom Mr. Ratcliff oversees. The web page has continually dynamic content which about 6 people are continually changing with over 30 sets of match results and statistics flowing into the league headquarters on a weekly basis. Mr. Ratcliff oversees the whole operation remotely. His team of officials has been extremely successful in their effort and have been featured in a recent Wall Street Journal article.</p>	
Author of QFig	A popular C++ Modification for an Internet game which has been downloaded at least 35,000 times.	
Other Activities	Soccer, flag football, jogging, pottery, and Ayn Rand	

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